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NEWS 6 May 27 CAPLUS super roles and document types searchable in REGISTRY
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* * * * * STN Columbus * * * * *

FILE 'HOME' ENTERED AT 17:31:26 ON 18 AUG 2004

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FILE 'CAPLUS' ENTERED AT 17:31:43 ON 18 AUG 2004

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8/18/04

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FILE COVERS 1907 - 18 Aug 2004 VOL 141 ISS 8
FILE LAST UPDATED: 17 Aug 2004 (20040817/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> s metal oxide and dispersion

1508771 METAL
770192 METALS
1832030 METAL
(METAL OR METALS)
1490372 OXIDE
317350 OXIDES
1581442 OXIDE
(OXIDE OR OXIDES)
85714 METAL OXIDE
(METAL(W) OXIDE)
302317 DISPERSION
53606 DISPERSIONS
326071 DISPERSION
(DISPERSION OR DISPERSIONS)
L1 2529 METAL OXIDE AND DISPERSION

=> s l1 and surfactant

161196 SURFACTANT
144701 SURFACTANTS
204329 SURFACTANT
(SURFACTANT OR SURFACTANTS)
L2 118 L1 AND SURFACTANT

=> s (oleic acid or dodecylbenzene sulfonic acid)

58725 OLEIC
1 OLEICS
58725 OLEIC
(OLEIC OR OLEICS)
3856606 ACID
1442389 ACIDS
4325713 ACID
(ACID OR ACIDS)
51102 OLEIC ACID
(OLEIC(W) ACID)
2668 DODECYLBENZENE
28 DODECYLBENZENES
2682 DODECYLBENZENE
(DODECYLBENZENE OR DODECYLBENZENES)
69953 SULFONIC
20 SULFONICS
69967 SULFONIC
(SULFONIC OR SULFONICS)
3856606 ACID
1442389 ACIDS
4325713 ACID
(ACID OR ACIDS)
324 DODECYLBENZENE SULFONIC ACID
(DODECYLBENZENE(W) SULFONIC(W) ACID)
L3 51419 (OLEIC ACID OR DODECYLBENZENE SULFONIC ACID)

=> s 12 and 13

L4 , 2 L2 AND L3

=> d 14 1-2 all

L4 ANSWER 1 OF 2 CAPLUS COPYRIGHT 2004 ACS on STN

Full Text	Citing References
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AN 2003:570991 CAPLUS

DN 139:135883

ED Entered STN: 25 Jul 2003

TI Additive to lubrication oils containing colloidal calcium carbonate

IN Kaibaldin, Konstantin Arturovich; Sukhoverkhov, Viktor Dmitrievich

PA Ukraine

SO PCT Int. Appl., 29 pp.

CODEN: PIXXD2

DT Patent

LA Russian

IC ICM C07F009-17

ICS C07F009-18; C01F011-18; C10M141-10; B01F017-14; C10M125-10;
C10M137-10

CC 51-8 (Fossil Fuels, Derivatives, and Related Products)

Section cross-reference(s): 29, 66

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003059920	A1	20030724	WO 2002-UA17	20020425
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
PRAI UA 2001-129189	A	20011228		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 2003059920	ICM	C07F009-17
	ICS	C07F009-18; C01F011-18; C10M141-10; B01F017-14; C10M125-10; C10M137-10

AB The invention relates to methods for producing additives to lubrication oils and to lubrication oils contg. such additives. To produce the colloidal **dispersions** of carbonate of alkali-earth metals, a compn. having a general formula (1), which is disclosed in the formula of the invention, is used. Said compn. is produced by the interaction of dialkyldithiophosphate and/or zinc dialkylaryl-dithiophosphate with oxide or hydroxide of alk.-earth metal in a hydrocarbon solvent medium and water at 20-75° during 0.5-1 h. To produce the colloidal **dispersion** of an alk.-earth metal in oil, one or several surface-active substances are mixed in mineral oil and a hydrocarbon solvent with one or several compns. of the formula (1) in a quantity of 5-50% of a reaction mixt., oxide or hydroxide of alk.-earth metal and water, the thus obtained mixt. being treated by carbon dioxide at 20-75° during 0.5-1 h. In the other method, a surface-active substance is mixed with dialkyldithiophosphate and/or zinc dialkylaryl-dithiophosphate in a quantity of 5-50% of a reaction mixt., oxide or hydroxide of alk.-earth metal in the medium of a mineral oil, hydrocarbon solvent and water, the thus obtained mixt. being treated by carbon dioxide at 20-75° during 0.5-1 h. Said colloidal **dispersions** are used as additives to lubrication oils at a ratio of 2-15%. Said invention makes it possible to reduce the prodn. costs of the

additives and oils and improves the functional characteristics thereof.

ST , additive lubricating oil zinc dithiophosphate calcium carbonate colloidal **dispersion**

IT Carbonation
Colloids
Lubricating oil additives
Surfactants
(additive to lubrication oils contg. colloidal calcium carbonate)

IT Hydrocarbon oils
RL: NUU (Other use, unclassified); USES (Uses)
(additive to lubrication oils contg. colloidal calcium carbonate)

IT Alkaline earth hydroxides
RL: RCT (Reactant); RACT (Reactant or reagent)
(additive to lubrication oils contg. colloidal calcium carbonate)

IT Alkaline earth oxides
RL: RCT (Reactant); RACT (Reactant or reagent)
(additive to lubrication oils contg. colloidal calcium carbonate)

IT Lubricating oil additives
(antioxidants; additive to lubrication oils contg. colloidal calcium carbonate)

IT Lubricating oil additives
(antiwear; additive to lubrication oils contg. colloidal calcium carbonate)

IT Lubricating oils
(base oils, M-11, SAE-20W30, SAE-30; additive to lubrication oils contg. colloidal calcium carbonate)

IT Sulfonic acids, uses
RL: MOA (Modifier or additive use); USES (Uses)
(calcium salts; additive to lubrication oils contg. colloidal calcium carbonate)

IT Lubricating oil additives
(corrosion inhibitors; additive to lubrication oils contg. colloidal calcium carbonate)

IT Lubricating oils
(crankcase; additive to lubrication oils contg. colloidal calcium carbonate)

IT Stabilizing agents
(lubricating oil additives; additive to lubrication oils contg. colloidal calcium carbonate)

IT Phenols, uses
RL: MOA (Modifier or additive use); USES (Uses)
(metal salts, alkyl-, alk. earth metal salts; additive to lubrication oils contg. colloidal calcium carbonate)

IT Polyamines
RL: MOA (Modifier or additive use); USES (Uses)
(polyethylene-, reaction products, reaction products with calcium C22-alkylbenzenesulfonate, formaldehyde, and **oleic acid**; additive to lubrication oils contg. colloidal calcium carbonate)

IT Mannich bases
RL: MOA (Modifier or additive use); USES (Uses)
(reaction products contg. unsatd. fatty acids; additive to lubrication oils contg. colloidal calcium carbonate)

IT Hydrocarbons, uses
RL: NUU (Other use, unclassified); USES (Uses)
(solvent; additive to lubrication oils contg. colloidal calcium carbonate)

IT Lubricating oil additives
(stabilizers; additive to lubrication oils contg. colloidal calcium carbonate)

IT Fatty acids, uses
RL: MOA (Modifier or additive use); USES (Uses)
(unsatd., reaction products with Mannich bases; additive to lubrication oils contg. colloidal calcium carbonate)

- IT 50-00-0D, Formaldehyde, reaction products with calcium C22-alkylbenzenesulfonate, **oleic acid**, and poly(diethylenepolyamine) 108-95-2D, Phenol, C100-C128, Mannich base-type reaction products with calcium C22-alkylbenzenesulfonate, formaldehyde, and poly(diethylenepolyamine) 112-80-1D, **Oleic acid**, reaction products with calcium C22-alkylbenzenesulfonate, formaldehyde, and poly(diethylenepolyamine) 123-56-8D, Succinimide, polyisobutenyl deriv. 30977-64-1, Calcium nonylphenolate
RL: MOA (Modifier or additive use); USES (Uses)
(additive to lubrication oils contg. colloidal calcium carbonate)
- IT 98-11-3D, Benzenesulfonic acid, C22 and other alkyl derivs., alk. earth metal salts
RL: MOA (Modifier or additive use); RCT (Reactant); RACT (Reactant or reagent); USES (Uses)
(additive to lubrication oils contg. colloidal calcium carbonate)
- IT 1305-62-0DP, Calcium hydroxide, complexes with zinc di-C2-C8 alkyl- and di- C9-C12 alkyl-aryl- dithiophosphate O- esters 4563-55-7DP, Zinc diisobutyl phosphorodithioate, complexes with calcium hydroxide 6990-43-8DP, Zinc dibutyl dithiophosphate, complexes with calcium hydroxide 7268-60-2DP, Zinc diethyl dithiophosphate, complexes with calcium hydroxide 19210-06-1DP, Zinc dithiophosphate, di- C2-C8 alkyl or di- C9-C12 alkyl-aryl O-esters 26566-95-0DP, Zinc bis[O-(2-ethylhexyl)-O'-isobutyl] dithiophosphate, complexes with calcium hydroxide 27985-91-7DP, complexes with calcium hydroxide 91650-70-3DP, complexes with calcium hydroxide 142276-46-8DP, Phosphorodithioic acid, calcium zinc salt, di- C2-C8 alkyl or di- C9-C12 alkyl-aryl O-esters
RL: MOA (Modifier or additive use); RCT (Reactant); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(additive to lubrication oils contg. colloidal calcium carbonate)
- IT 69-72-7DP, Salicylic acid, C16-C18 alkyl and other alkyl derivs., alk. earth metal salts
RL: MOA (Modifier or additive use); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(additive to lubrication oils contg. colloidal calcium carbonate)
- IT 19210-06-1DP, Zinc dithiophosphate, di- C2-C8 alkyl or di- C9-C12 alkyl-aryl O-esters, complexes with alk. earth **metal oxides** and hydroxides
RL: MOA (Modifier or additive use); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(additive to lubrication oils contg. colloidal calcium carbonate)
- IT 11059-65-7D, complexes with calcium hydroxide
RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
(additive to lubrication oils contg. colloidal calcium carbonate)
- IT 71-43-2, Benzene, uses
RL: NUU (Other use, unclassified); USES (Uses)
(additive to lubrication oils contg. colloidal calcium carbonate)
- IT 7732-18-5, Water, uses
RL: NUU (Other use, unclassified); RCT (Reactant); RACT (Reactant or reagent); USES (Uses)
(additive to lubrication oils contg. colloidal calcium carbonate)
- IT 78-83-1, Isobutanol, reactions 104-76-7, 2-Ethylhexanol 124-38-9, Carbon dioxide, reactions 1305-62-0, Calcium hydroxide, reactions 1314-80-3, Phosphorus pentasulfide (P2S5) 35296-72-1, Butanol 38888-96-9, Nonylphenol sulfide, calcium salt 73366-53-7, Dodecylphenol sulfide, calcium salt
RL: RCT (Reactant); RACT (Reactant or reagent)
(additive to lubrication oils contg. colloidal calcium carbonate)
- IT 463-79-6DP, Carbonic acid, alkali earth metal salts
RL: IMF (Industrial manufacture); MOA (Modifier or additive use); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(colloidal **dispersions** of; additive to lubrication oils contg. colloidal calcium carbonate)

- IT 471-34-1P, Calcium carbonate, uses
 RL: MOA (Modifier or additive use); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (colloidal; additive to lubrication oils contg. colloidal calcium carbonate)
- IT 7439-92-1, Lead, properties 7440-50-8, Copper, properties
 RL: PRP (Properties) (corrosion of; additive to lubrication oils contg. colloidal calcium carbonate)
- IT 1314-13-2, Zinc oxide, reactions
 RL: RCT (Reactant); RACT (Reactant or reagent) (neutralization of di-O-esters of dithiophosphoric acids; additive to lubrication oils contg. colloidal calcium carbonate)

RE.CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD
 RE

- (1) Infineum International Limited; EP 1018539 A2 2000 CAPLUS
- (2) Karonite Chemical Co Ltd; US 4057504 A 1977
- (3) Phillips Petroleum Company; US 3523897 A 1970 CAPLUS
- (4) Societe Nationale Elf Aquitaine; EP 0438942 A1 1991 CAPLUS
- (5) The Lubrizol Corporation; WO 8906237 A1 1989 CAPLUS

L4 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2004 ACS on STN

Full Text	Citing References
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- AN 1995:37517 CAPLUS
 DN 122:41298
 ED Entered STN: 08 Nov 1994
 TI Photophysical studies on nanoscale clusters and cluster-assembled materials
- AU LI, Tiejin; Xiao, Liangzhi; Peng, Xiaogang; Zhang, Yan; Zou, Bingsuo; Wang, Dejun; Fei, Haosheng; Bao, Xinnu; Zhu, Ziqiang
 CS Jilin University, Changchun, 130023, Peop. Rep. China
 SO Photochem. Photoelectrochem. Convers. Storage Sol. Energy, Proc. Int. Conf., 9th (1993), Meeting Date 1992, 313-29. Editor(s): Tian, Zhao Wu. Publisher: Int. Acad. Publ., Beijing, Peop. Rep. China. CODEN: 60HRAS
- DT Conference
 LA English
 CC 73-4 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)
- AB There are several subjects been mentioned. The red shift is discussed of the optical absorption band edge of TiO₂ ultrafine particles (UFP) caused by the Coulomb term of the equation given by L.E. Brus (1986, 1987, 1989). The nonlinear optical properties are discussed of Fe₂O₃ UFP (as the example of several kinds of **metal oxide** semiconductor UFP). $\chi(3)$ Of the UFP coated with a layer of **surfactant** increases 2 orders comparing with the naked UFP, resulting from the dielec. confinement. The nanocluster ordered assemblies built-up by Langmuir-Blodgett (LB) technique are discussed. The fatty acid salts LB films is only suitable for the prepn. of the inorg. compd. monolayers by the reaction of the LB films with H₂S or other agents, and the LB films of PMAO (polymaleic acid octodecanol part ester) salts is a better matrix. By LB method, the nanoclusters can be transferred directly from their hydrosol to form a kind of 3 dimensional quantum dot superlattice.
- ST photophys nanoscale cluster assembled material
 IT Optical absorption (band edge; of titanium dioxide ultrafine particles)
 IT Optical nonlinear property (four-wave mixing; of ferric oxide **surfactant**-coated ultrafine particles)
 IT Fatty acids, uses
 RL: RCT (Reactant); TEM (Technical or engineered material use); RACT (Reactant or reagent); USES (Uses) (nanoscale cluster-assembled materials by reaction of hydrogen sulfide

- with Langmuir-Blodgett films contg.)
- IT Materials
(nanoscale cluster-assembled; photophys. studies on)
- IT Clusters
(nanoscale; photophys. studies on)
- IT **Surfactants**
(nonlinear optical properties of ultrafine particles coated with layer of)
- IT Dielectric constant and **dispersion**
(of ultrafine particles coated with **surfactant** layer)
- IT Superlattices
(quantum dot; photophys. studies on nanoscale clusters and cluster-assembled materials)
- IT Films
(Langmuir-Blodgett, fatty acid; nanoscale cluster-assembled materials by reaction of hydrogen sulfide with)
- IT Semiconductor devices
(quantum dots, superlattice; photophys. studies on nanoscale clusters and cluster-assembled materials)
- IT Optical nonlinear property
(third-order, of ferric oxide **surfactant**-coated ultrafine particles)
- IT 7789-75-5, Calcium difluoride, uses
RL: NUU (Other use, unclassified); USES (Uses)
(IR spectra of lead stearate Langmuir-Blodgett films on)
- IT 57-11-4, Stearic acid, uses
RL: RCT (Reactant); TEM (Technical or engineered material use); RACT (Reactant or reagent); USES (Uses)
(lead sulfide reaction with hydrogen sulfide in Langmuir-Blodgett films contg.)
- IT 7783-06-4, Hydrogen sulfide, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(nanoscale cluster-assembled materials by reaction of Langmuir-Blodgett films with)
- IT 112-80-1, **Oleic acid**, uses 822-16-2, Sodium stearate
1072-35-1, Lead distearate 25155-30-0, Sodium dodecylbenzenesulfonate
159745-54-7
RL: RCT (Reactant); TEM (Technical or engineered material use); RACT (Reactant or reagent); USES (Uses)
(nanoscale cluster-assembled materials by reaction of hydrogen sulfide with Langmuir-Blodgett films contg.)
- IT 1309-37-1, Ferric oxide, properties
RL: PRP (Properties)
(nonlinear optical properties of **surfactant**-coated ultrafine particles of)
- IT 13463-67-7, Titanium dioxide, properties
RL: PRP (Properties)
(optical absorption band edge of ultrafine particles of)
- IT 7440-21-3, Silicon, uses
RL: NUU (Other use, unclassified); USES (Uses)
(photocond. and x-ray diffraction of ferric oxide-stearic acid Langmuir-Blodgett films on)
- IT 7631-86-9, Silica, uses
RL: MOA (Modifier or additive use); USES (Uses)
(photocond. and x-ray diffraction of ferric oxide-stearic acid Langmuir-Blodgett films on silicon contg.)
- IT 1314-87-0, Lead monosulfide
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction with hydrogen sulfide in stearic acid Langmuir-Blodgett films)

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(FILE 'HOME' ENTERED AT 17:31:26 ON 18 AUG 2004)

FILE 'CAPLUS' ENTERED AT 17:31:43 ON 18 AUG 2004

L1 2529 S METAL OXIDE AND DISPERSION
 L2 118 S L1 AND SURFACTANT
 L3 51419 S (OLEIC ACID OR DODECYLBENZENE SULFONIC ACID)
 L4 2 S L2 AND L3

=> s 12 and (magnesium oxide or calcium oxide or titanium oxide or iron oxide or strontium oxide

407813 MAGNESIUM
 88 MAGNESIUMS
 407847 MAGNESIUM
 (MAGNESIUM OR MAGNESIUMS)
 1490372 OXIDE
 317350 OXIDES
 1581442 OXIDE
 (OXIDE OR OXIDES)
 55969 MAGNESIUM OXIDE
 (MAGNESIUM(W) OXIDE)
 692144 CALCIUM
 32 CALCIUMS
 692147 CALCIUM
 (CALCIUM OR CALCIUMS)
 1490372 OXIDE
 317350 OXIDES
 1581442 OXIDE
 (OXIDE OR OXIDES)
 36394 CALCIUM OXIDE
 (CALCIUM(W) OXIDE)
 417222 TITANIUM
 77 TITANIUMS
 417232 TITANIUM
 (TITANIUM OR TITANIUMS)
 1490372 OXIDE
 317350 OXIDES
 1581442 OXIDE
 (OXIDE OR OXIDES)
 78432 TITANIUM OXIDE
 (TITANIUM(W) OXIDE)
 892551 IRON
 11157 IRONS
 893330 IRON
 (IRON OR IRONS)
 1490372 OXIDE
 317350 OXIDES
 1581442 OXIDE
 (OXIDE OR OXIDES)
 85869 IRON OXIDE
 (IRON(W) OXIDE)
 167157 STRONTIUM
 4 STRONTIUMS
 167158 STRONTIUM
 (STRONTIUM OR STRONTIUMS)
 1490372 OXIDE
 317350 OXIDES
 1581442 OXIDE
 (OXIDE OR OXIDES)
 51311 STRONTIUM OXIDE
 (STRONTIUM(W) OXIDE)
 223905 BARIUM
 12 BARIUMS
 223907 BARIUM
 (BARIUM OR BARIUMS)
 1490372 OXIDE

317350 OXIDES
 1581442 OXIDE
 (OXIDE OR OXIDES)
 16024 BARIUM OXIDE
 (BARIUM(W)OXIDE)
 L5 34 L2 AND (MAGNESIUM OXIDE OR CALCIUM OXIDE OR TITANIUM OXIDE OR
 IRON OXIDE OR STRONTIUM OXIDE OR BARIUM OXIDE)

=> d 15 1-34 all

L5 ANSWER 1 OF 34 CAPLUS COPYRIGHT 2004 ACS on STN

Full Text	Citing References
AN 2004:462800 CAPLUS	
DN 141:25183	
ED Entered STN: 09 Jun 2004	
TI Aqueous magnetic ink character recognition ink-jet ink composition containing a combination of special surfactants	
IN Mcelligott, Michael J.; Snyder, Donald E., Jr.; Coutta, Ronald E.	
PA Nu-Kote International, Inc., USA	
SO U.S., 6 pp.	
CODEN: USXXAM	
DT Patent	
LA English	
IC ICM C09D011-00	
NCL 106031650; 106031670; 106031660; 106457000; 106460000; 106480000; 106479000; 106453000; 106499000	
CC 42-12 (Coatings, Inks, and Related Products)	
FAN.CNT 1	
PATENT NO.	KIND DATE APPLICATION NO. DATE
US 6746527	B1 20040608 US 2003-397912 20030326
US 2003-397912	20030326

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
US 6746527	ICM	C09D011-00
	NCL	106031650; 106031670; 106031660; 106457000; 106460000; 106480000; 106479000; 106453000; 106499000

AB An aq. ink-jet ink compn. for MICR applications is provided comprising a **metal oxide pre-dispersion** combined with an aq. ink-jet ink compn., wherein the **metal oxide pre-dispersion** contains **metal oxide** pigment or particles of a very small particle size, at least one **surfactant** to aid in the aid in the **dispersion** of the **metal oxide** particles. Particularly, the **surfactant** component is a combination of an anionic **surfactant** and an anionic-nonionic **surfactant**, or may be a combination of other types of **surfactants**.

ST aq magnetic ink character recognition jet compn **metal oxide**

IT **Surfactants**
 (anionic; aq. magnetic ink character recognition ink-jet ink compn. contg. combination of special **surfactants**)

IT Oxides (inorganic), uses
 RL: TEM (Technical or engineered material use); USES (Uses)
 (aq. magnetic ink character recognition ink-jet ink compn. contg. combination of special **surfactants**)

IT Magnetic materials
 (inks; aq. magnetic ink character recognition ink-jet ink compn. contg. combination of special **surfactants**)

IT Inks
 (jet-printing; aq. magnetic ink character recognition ink-jet ink compn. contg. combination of special **surfactants**)

IT Inks
 (magnetic; aq. magnetic ink character recognition ink-jet ink compn. contg. combination of special **surfactants**)

IT **Surfactants**
 (nonionic; aq. magnetic ink character recognition ink-jet ink compn. contg. combination of special **surfactants**)

IT 108-31-6D, Maleic anhydride, copolymers, sodium salts
 RL: TEM (Technical or engineered material use); USES (Uses)
 (anionic **surfactant**; aq. magnetic ink character recognition ink-jet ink compn. contg. combination of special **surfactants**)

IT 1309-38-2, Magnetic oxide, uses 1332-37-2, **Iron oxide**, uses
 RL: TEM (Technical or engineered material use); USES (Uses)
 (aq. magnetic ink character recognition ink-jet ink compn. contg. combination of special **surfactants**)

RE.CNT 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

- (1) Brown; US 6638982 B2 2003 CAPLUS
- (2) Foucher; US 5969003 A 1999 CAPLUS
- (3) Kappeler; US 5656071 A 1997 CAPLUS
- (4) Mitchell; US 5026427 A 1991 CAPLUS
- (5) Nishizawa; US 5547804 A 1996 CAPLUS
- (6) Sambucetti; US 4026713 A 1977 CAPLUS
- (7) Thakur; US 5240626 A 1993 CAPLUS
- (8) Ziolo; US 5670078 A 1997 CAPLUS

L5 ANSWER 2 OF 34 CAPLUS COPYRIGHT 2004 ACS on STN

Full Text	Citing References
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AN 2004:264849 CAPLUS
 DN 140:289564
 ED Entered STN: 01 Apr 2004
 TI **Dispersions** of ultrafine **metal-oxide** particles and thin films of ultrafine **metal-oxide** particles
 IN Yamashita, Yasuhisa
 PA Murata Manufacturing Co., Ltd., Japan
 SO PCT Int. Appl., 37 pp.
 CODEN: PIXXD2
 DT Patent
 LA Japanese
 IC ICM C01B013-32
 ICS C01G023-00
 CC 49-3 (Industrial Inorganic Chemicals)
 FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
<u>WO 2004026762</u>	A1	20040401	<u>WO 2003-JP11821</u>	20030917
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
<u>PRAI JP 2002-274598</u>	A	20020920		
<u>JP 2003-77651</u>	A	20030320		
<u>JP 2003-313463</u>	A	20030905		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
<u>WO 2004026762</u>	ICM	C01B013-32
	ICS	C01G023-00

AB The title **dispersions** are manufd. by hydrolysis of micro-emulsions

contg. composite metal alkoxides, hydrophobic dispersing media, water(0.95-3.0 times the theor. amt.), and **surfactants**, and used for manuf. of the title thin films(e.g., perovskite Ba-Ti oxides).

ST **metal oxide** ultrafine particle **dispersion** film

IT Oxides (inorganic), preparation

RL: IMF (Industrial manufacture); PREP (Preparation)
(ultrafine particles; **dispersions** of ultrafine **metal-oxide** particles and thin films of ultrafine **metal-oxide** particles)

IT 12047-27-7P, Barium **titanium oxide**, preparation

RL: IMF (Industrial manufacture); PREP (Preparation)
(perovskite; thin films of ultrafine barium-**titanium oxide** particles)

RE.CNT 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

- (1) Kaneka Corp; JP 03-46401 B2 1991 CAPLUS
- (2) Kaneka Corp; EP 125507 A2 1991 CAPLUS
- (3) Kaneka Corp; US 4579594 A 1991 CAPLUS
- (4) Kaneka Corp; US 4668299 A 1991 CAPLUS
- (5) Ricoh Co Ltd; JP 02-233505 A 1990 CAPLUS
- (6) Ricoh Co Ltd; JP 03-69506 A 1991 CAPLUS

L5 ANSWER 3 OF 34 CAPLUS COPYRIGHT 2004 ACS on STN

Full Text	Citing References
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AN 2004:263021 CAPLUS

DN 140:408102

ED Entered STN: 31 Mar 2004

TI Nano-structured polymer coatings for ultraviolet protection

AU Katangur, Phaneshwar; Warner, Steven B.; Patra, Prabir K.; Kim, Yong K.; Mhetre, Shamal K.; Dhanote, Autumn

CS Department of Textile Science, University of Massachusetts Dartmouth, N. Dartmouth, MA, 02747, USA

SO Materials Research Society Symposium Proceedings (2003), 788(Continuous Nanophase and Nanostructured Materials), 589-594
CODEN: MRSPDH; ISSN: 0272-9172

PB Materials Research Society

DT Journal

LA English

CC 40-5 (Textiles and Fibers)

Section cross-reference(s): 42, 78

AB Polymer materials such as Kevlar that are susceptible to UV degrdn. may be protected by appropriate coatings. We are using zinc oxide and titanium dioxide nanoparticles with an av. particle size ranging from 25 to 70 nm. Five wt. percent nanoparticles were dispersed in acrylic coatings, the **dispersion** is assisted by addn. of a non-ionic **surfactant**, mech. stirring and ultrasonication. The UV protective mechanism of

nanoparticle-embedded coatings is theor. explained using Mie theory. We estd. the min. thickness of a 5 wt. % nanoparticle-embedded coatings that is required to prevent the UV radiation from reaching the base of the substrate. Results obtained from nanoparticle-embedded acrylic-coated Kevlar fabric and neat acrylic-coated Kevlar fabric after exposure to UV radiation in QUV weatherometer show that the nanoparticle coating offers protection. UV-visible spectroscopy was used to obtain quant. results.

ST Kevlar fabric nanoparticle coating zinc oxide titania acrylic resin; UV protection **metal oxide** nanoparticle coating Kevlar

IT Nanoparticles

(Kevlar fabrics coated with nano-structured coatings contg. zinc or **titanium oxide** for UV protection)

IT Acrylic polymers, uses

RL: POF (Polymer in formulation); PRP (Properties); USES (Uses)

(Kevlar fabrics coated with nano-structured coatings contg. zinc or **titanium oxide** for UV protection)

IT Coating materials

(UV-resistant; Kevlar fabrics coated with nano-structured coatings contg. zinc or **titanium oxide** for UV protection)

IT Absorptivity
(UV; of Kevlar fabrics coated with nano-structured coatings contg. zinc or **titanium oxide**)

IT Polyamide fibers, uses
RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
(aramid; Kevlar fabrics coated with nano-structured coatings contg. zinc or **titanium oxide** for UV protection)

IT Dispersing agents
(in prepn. of Kevlar fabrics coated with nano-structured coatings contg. zinc or **titanium oxide**)

IT 1314-13-2, Zinc oxide, uses 13463-67-7, Titanium dioxide, uses
RL: MOA (Modifier or additive use); PRP (Properties); USES (Uses)
(Kevlar fabrics coated with nano-structured coatings contg. zinc or **titanium oxide** for UV protection)

IT 61827-42-7, Trycol 5952
RL: MOA (Modifier or additive use); USES (Uses)
(dispersant; in prepn. of Kevlar fabrics coated with nano-structured coatings contg. zinc or **titanium oxide**)

RE.CNT 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD

- RE
- (1) Benedict, R; Seymour/Carraher's Polymer Chemistry 2000, P423
 - (2) Bohren, C; Absorption and Scattering of light by Small Particles 1981, P130
 - (3) Innes, B; <http://www.ant-powders.com/pdfs/ASCCconferencepapersscreenquality.pdf>
 - (4) McNaught, A; IUPAC Compendium of Chemical Terminology, 2nd edition 1997, P3
 - (5) Phaneshwar, K; Poly Mater Sci & Eng 2003, V89, P723
 - (6) Sakamoto, M; J Jpn Soc Mater 1995, V68(4) CAPLUS
 - (7) Wypych, G; Hand Book of Material Weathering 2003, P1

L5 ANSWER 4 OF 34 CAPLUS COPYRIGHT 2004 ACS on STN

Full Text Citing References

AN 2004:18577 CAPLUS
DN 140:61180
ED Entered STN: 09 Jan 2004
TI Aqueous magnetic ink character recognition ink-jet ink composition
IN McElligott, Michael J.; Snyder, Donald E.
PA Nu-Kote International, Inc., USA
SO U.S. Pat. Appl. Publ., 11 pp.
CODEN: USXXCO
DT Patent
LA English
IC ICM C09D011-02
ICS C09C001-34; C09C001-22; C04B014-00; C08K005-00
NCL 106031650; 106031670; 106031860; 106457000; 106460000; 106480000;
106453000; 106479000; 106499000
CC 42-12 (Coatings, Inks, and Related Products)

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2004003756	A1	20040108	US 2002-186492	20020701
US 6726759	B2	20040427		
WO 2004003087	A1	20040108	WO 2003-US14898	20030512

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG,

CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC,
 NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ,
 GW, ML, MR, NE, SN, TD, TG

PRAI US 2002-186492 A 20020701

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
US 2004003756	ICM	C09D011-02
	ICS	C09C001-34; C09C001-22; C04B014-00; C08K005-00
	NCL	106031650; 106031670; 106031860; 106457000; 106460000; 106480000; 106453000; 106479000; 106499000

US 2004003756 ECLA C09D011/00C2B

AB An aq. ink-jet ink compn. for magnetic ink character recognition (MICR) applications is provided comprising a **metal oxide pre-dispersion** combined with an aq. ink-jet ink compn., wherein the **metal oxide pre-dispersion** contains **metal oxide** pigment or particles of a very small particle size, about 0.5 μ m or less, and exhibiting remanence of at least 20 emu/g. The **metal oxide** particles may be coated with a hydrophilic coating, and the **pre-dispersion** may contain at least one **surfactant** to aid in the **dispersion** of the **metal oxide** particles. Also provided are various processing techniques to enhance the MICR ink performance, including conventional and non-conventional grinding techniques and various filtration techniques to enhance the MICR ink performance, including conventional and non-conventional grinding techniques and various filtration techniques.

ST magnetic character recognition ink aq jet printing oxide particle

IT Oxides (inorganic), uses

RL: TEM (Technical or engineered material use); USES (Uses)

(aq. magnetic ink character recognition ink-jet ink compn.)

IT Inks

(jet-printing, water-thinned; aq. magnetic ink character recognition ink-jet ink compn.)

IT 1309-38-2, Magnetite, uses 1312-76-1, Potassium silicate 1312-81-8, Lanthanum oxide 1313-97-9, Neodymium oxide 1314-36-9, Yttrium oxide, uses 1332-37-2, **Iron oxide**, uses 1344-09-8, Sodium silicate 1344-70-3, Copper oxide 1344-72-5, Copper silicate 11099-11-9, Vanadium oxide 11104-61-3, Cobalt oxide 11118-57-3, Chromium oxide 11129-60-5, Manganese oxide

RL: TEM (Technical or engineered material use); USES (Uses)

(aq. magnetic ink character recognition ink-jet ink compn.)

IT 1335-30-4, Aluminum silicate

RL: TEM (Technical or engineered material use); USES (Uses)

(hydrophilic coating; aq. magnetic ink character recognition ink-jet ink compn.)

L5 ANSWER 5 OF 34 CAPLUS COPYRIGHT 2004 ACS on STN

Full Text	Citing References
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AN 2004:3309 CAPLUS

DN 140:61166

ED Entered STN: 04 Jan 2004

TI Process for the preparation of aqueous magnetic ink character recognition ink-jet ink compositions

IN Mcelligott, Michael J.; Snyder, Donald E.

PA Nu-Kote International, Inc., USA

SO U.S. Pat. Appl. Publ., 9 pp.

CODEN: USXXCO

DT Patent

LA English

IC ICM C09C001-34

ICS C09C001-22; C09D011-00; C01G049-08

NCL 106031650; 252062560; 252062590; 106456000; 106453000; 106479000;
106480000

CC 42-12 (Coatings, Inks, and Related Products)

Section cross-reference(s): 74

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2004000254	A1	20040101	US 2002-186440	20020701
	US 6767396	B2	20040727		
	WO 2004003088	A1	20040108	WO 2003-US14910	20030512
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
PRAI	US 2002-186440	A	20020701		

CLASS

	PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
	US 2004000254	ICM	C09C001-34
		ICS	C09C001-22; C09D011-00; C01G049-08
		NCL	106031650; 252062560; 252062590; 106456000; 106453000; 106479000; 106480000
AB	A process for prep. an aq. ink-jet ink compn. for MICR applications is provided comprising prep. a metal oxide pre-dispersion combined with an aq. ink-jet ink compn., wherein the metal oxide pre-dispersion contains metal oxide pigment or particles of a very small particle size, about 0.5 μ m or less, and exhibiting high remanence of at least 20 emu/g. The metal oxide particles may be coated with a hydrophilic coating, and the pre-dispersion may contain at least one surfactant to aid in the dispersion of the metal oxide particles. Special processing involving the use of conventional and non-conventional grinding techniques and various filtration techniques enhance the compatibility of the MICR ink-jet ink with the ink-jet equipment, resulting in superior ink life and print quality.		
ST	magnetic ink character recognition ink jet compn; metal oxide dispersion magnetic ink character recognition ink jet		
IT	Inks (jet-printing; process for prepn. of aq. magnetic ink character recognition ink-jet ink compns.)		
IT	Silicates, uses RL: TEM (Technical or engineered material use); USES (Uses) (pigment coatings; process for prepn. of aq. magnetic ink character recognition ink-jet ink compns.)		
IT	Oxides (inorganic), uses RL: TEM (Technical or engineered material use); USES (Uses) (pigments; process for prepn. of aq. magnetic ink character recognition ink-jet ink compns.)		
IT	1335-30-4, Aluminum silicate RL: TEM (Technical or engineered material use); USES (Uses) (coating; process for prepn. of aq. magnetic ink character recognition ink-jet ink compns.)		
IT	1309-38-2, Magnetite, uses 1312-81-8, Lanthanum oxide 1314-36-9, Yttrium oxide, uses 1332-37-2, Iron oxide , uses 1344-70-3, Copper oxide 11099-11-9, Vanadium oxide 11104-61-3, Cobalt oxide 11118-57-3, Chromium oxide 11129-60-5, Manganese oxide 12648-30-5, Neodymium oxide RL: TEM (Technical or engineered material use); USES (Uses) (pigment; process for prepn. of aq. magnetic ink character recognition ink-jet ink compns.)		

L5 ANSWER 6 OF 34 CAPLUS COPYRIGHT 2004 ACS on STN

Full Text	Citing References
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AN 2003:805911 CAPLUS
 DN 139:308940
 ED Entered STN: 15 Oct 2003
 TI coating compositions with good dyeability and durability and laminates
 IN Takeshita, Katsuyoshi
 PA Seiko Epson Corp., Japan
 SO Jpn. Kokai Tokkyo Koho, 9 pp.
 CODEN: JKXXAF
 DT Patent
 LA Japanese
 IC ICM C09D163-00
 ICS C09D183-02; C09D183-07; G02B001-11
 CC 42-10 (Coatings, Inks, and Related Products)
 Section cross-reference(s): 63

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2003292882	A2	20031015	JP 2002-103447	20020405
JP 2002-103447		20020405		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
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JP 2003292882	ICM	C09D163-00
	ICS	C09D183-02; C09D183-07; G02B001-11

AB Title compns. comprise (A) composite fine particles with particle size 1-100 μ m comprising **metal oxides** of Si, Sb, and Ti, (B) silane compds. having ≥ 1 polymerizable group, and (C) multifunctional epoxy compds. Thus, 20%-solids **titanium oxide**-antimony pentaoxide-silicon dioxide composite fine particle 1853.4, 30%-solids Oscal 1132 colloidal silica **dispersion** 225, and γ -glycidoxypyriltrimethoxysilane 399 g were mixed, Denacol EX 212 388.7, magnesium perchlorate 10.5, L 7001 silicone **surfactant** 1.5, and Sanol LS 770 5.3 g were added therein and pH was adjusted at 4.82 to give a coating compn., a lens was soaked therein, dried at 80° for 20 min, and baked at 110° for 180 min to give a coating with good appearance and dyeability, which was plasma-treated, vacuum-deposited with SiO₂, ZrO₂, SiO₂, ZrO₂, and SiO₂ in this order to give a test piece with good adhesion, dyeability, and durability.

ST coating compn dyeability durability laminate; **titanium oxide** antimony pentaoxide silicon dioxide composite fine particle; colloidal silica glycidoxypyriltrimethoxysilane Denacol coating compn

IT Polyurethanes, uses
 RL: POF (Polymer in formulation); TEM (Technical or engineered material use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (acrylic, primer coatings; coating compns. with good dyeability and durability and laminates)

IT Antireflective films
 Eyeglass lenses
 Primers (paints)
 (coating compns. with good dyeability and durability and laminates)

IT Silsesquioxanes
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
 (epoxy-; coating compns. with good dyeability and durability and laminates)

IT Silsesquioxanes
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

- (epoxy-polysiloxane-; coating compns. with good dyeability and durability and laminates)
- IT Polysiloxanes, uses
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
 (epoxy-silsesquioxane-; coating compns. with good dyeability and durability and laminates)
- IT Coating materials
 (hard coating; coating compns. with good dyeability and durability and laminates)
- IT Coating materials
 (multilayer; coating compns. with good dyeability and durability and laminates)
- IT Oxides (inorganic), uses
 RL: TEM (Technical or engineered material use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (particles; coating compns. with good dyeability and durability and laminates)
- IT Epoxy resins, uses
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
 (polysiloxane-silsesquioxane-; coating compns. with good dyeability and durability and laminates)
- IT Acrylic polymers, uses
 RL: POF (Polymer in formulation); TEM (Technical or engineered material use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (polyurethane-, primer coatings; coating compns. with good dyeability and durability and laminates)
- IT Acrylic polymers, uses
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
 (silicate-silsesquioxane-, epoxy; coating compns. with good dyeability and durability and laminates)
- IT Epoxy resins, uses
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
 (silsesquioxane-; coating compns. with good dyeability and durability and laminates)
- IT Polycarbonates, uses
 RL: TEM (Technical or engineered material use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (substrates; coating compns. with good dyeability and durability and laminates)
- IT 1314-23-4, Zirconium oxide, uses
 RL: MOA (Modifier or additive use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (antireflection coating; coating compns. with good dyeability and durability and laminates)
- IT 156941-04-7P, Denacol EX 314- γ -glycidoxypropyltrimethoxysilane copolymer 186143-01-1P, Denacol EX 212- γ -glycidoxypropyltrimethoxysilane copolymer 186143-02-2P, Denacol EX 321- γ -glycidoxypropyltrimethoxysilane- γ -methacryloyloxypropyltrimethoxysilane-tetramethoxysilane copolymer 186152-72-7P, Denacol EX 313- γ -glycidoxypropylmethyldimethoxysilane- γ -glycidoxypropyltrimethoxysilane copolymer
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
 (coating compns. with good dyeability and durability and laminates)

IT 13463-67-7, Titanium oxide, uses
 -RL: MQA (Modifier or additive use); THU (Therapeutic use); BIOL
 (Biological study); USES (Uses)
 (composite particle with antimony pentaoxide and silicon dioxide;
 coating compns. with good dyeability and durability and laminates)

IT 7631-86-9, Oscal 1132, uses
 RL: MOA (Modifier or additive use); THU (Therapeutic use); BIOL
 (Biological study); USES (Uses)
 (composite particle with titanium pentaoxide and antimony pentaoxide,
 optionally antireflective coating; coating compns. with good dyeability
 and durability and laminates)

IT 1314-60-9, Antimony pentaoxide
 RL: MOA (Modifier or additive use); THU (Therapeutic use); BIOL
 (Biological study); USES (Uses)
 (composite particle with titanium pentaoxide and silicon dioxide;
 coating compns. with good dyeability and durability and laminates)

IT 399519-21-2, Neostecker 700
 RL: POF (Polymer in formulation); TEM (Technical or engineered material
 use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (primer coating; coating compns. with good dyeability and durability
 and laminates)

L5 ANSWER 7 OF 34 CAPLUS COPYRIGHT 2004 ACS on STN

Full Text	Citing References
AN 2003:417935 CAPLUS	
DN 138:403249	
ED Entered STN: 01 Jun 2003	
TI Deacidification of cellulose-based materials using alkaline particles in hydrofluorocarbons	
IN Thomas, Raymond H. P.; Diggs, David	
PA Honeywell International Inc., USA	
SO PCT Int. Appl., 18 pp.	
CODEN: PIXXD2	
DT Patent	
LA English	
IC ICM D21H025-18	
CC 43-7 (Cellulose, Lignin, Paper, and Other Wood Products)	
Section cross-reference(s): 20	

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003044277	A2	20030530	WO 2002-US36955	20021118
WO 2003044277	A3	20031016		
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
US 2003150571	A1	20030814	US 2002-299474	20021118
PRAI US 2001-346759P	P	20011116		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 2003044277	ICM	D21H025-18
AB	A method of deacidification of a cellulose-based material comprises (a) providing a compn. comprising a hydrofluorocarbon (HFC) having b.p. from -18.5 to 55° and a deacidification agent dispersed in the	

hydrofluorocarbon, and (b) increasing pH of the cellulose-based material by contacting the material with the compn. The deacidification agent is selected from **metal oxides**, hydroxides, carbonates, salts, HFC is selected from pentafluoropropanes, pentafluorobutanes and hexafluorobutanes, and a fluorinated **surfactant** can be added. Thus, a compn. comprising HFC 245FA (1,000), **magnesium oxide** (3.2) and Fluorad FC 740 **surfactant** (0.8 g) was produced and used for deacidification of 63 yr old paper samples.

ST cellulose material paper deacidification alk particle hydrofluorocarbon **dispersion**

IT Books
Paper
(deacidification of cellulose-based materials using alk. particles in hydrofluorocarbons)

IT Hydroxides (inorganic)
Oxides (inorganic), uses
Salts, uses
RL: MOA (Modifier or additive use); USES (Uses)
(deacidification of cellulose-based materials using alk. particles in hydrofluorocarbons)

IT Hydrocarbons, uses
RL: NUU (Other use, unclassified); USES (Uses)
(fluoro; deacidification of cellulose-based materials using alk. particles in hydrofluorocarbons)

IT **Surfactants**
(fluorosurfactants; deacidification of cellulose-based materials using alk. particles in hydrofluorocarbons)

IT Carbonates, uses
RL: MOA (Modifier or additive use); USES (Uses)
(metal salts; deacidification of cellulose-based materials using alk. particles in hydrofluorocarbons)

IT 1309-48-4, Magnesium oxide, uses
RL: MOA (Modifier or additive use); USES (Uses)
(deacidification of cellulose-based materials using alk. particles in hydrofluorocarbons)

IT 406-58-6, HFC 365 460-73-1, HFC 245FA 679-86-7, HFC 245CA 811-97-2, HFC 134A 37145-47-4, Pentafluoropropane 74469-62-8, Hexafluorobutane 141529-32-0, Pentafluorobutane
RL: NUU (Other use, unclassified); USES (Uses)
(deacidification of cellulose-based materials using alk. particles in hydrofluorocarbons)

IT 78768-89-5, Fluorad FC 740
RL: NUU (Other use, unclassified); USES (Uses)
(fluorinated **surfactant**; deacidification of cellulose-based materials using alk. particles in hydrofluorocarbons)

L5 ANSWER 8 OF 34 CAPLUS COPYRIGHT 2004 ACS on STN

Full Text	Citing References
AN 2003:396690	CAPLUS
DN 138:390578	
ED Entered STN: 23 May 2003	
TI Sunscreen compositions containing metal oxide and nonionic surfactants	
IN Kessell, Lorna Margaret	
PA Imperial Chemical Industries PLC, UK	
SO PCT Int. Appl., 22 pp. CODEN: PIXXD2	
DT Patent	
LA English	
IC ICM A61K007-42	
CC 62-4 (Essential Oils and Cosmetics)	
FAN.CNT 1	

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PI WO 2003041677 A2 20030522 WO 2002-GB5107 20021113
 .WO 2003041677 A3 20030717
 W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,
 CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,
 GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,
 LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH,
 PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ,
 UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD,
 RU, TJ, TM
 RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG,
 CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL,
 PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR,
 NE, SN, TD, TG
 EP 1443894 A2 20040811 EP 2002-781391 20021113
 R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
 IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK
 PRAI GB 2001-27325 A 20011114
 WO 2002-GB5107 W 20021113

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 2003041677	ICM	A61K007-42
AB	A compn. comprises a nonionic surfactant and hydrophobic particles of metal oxide having the mean length of the primary particles in the range 50-90 nm, the mean width of the primary particles in the range 5-20 nm, and the median vol. particle diam. of the secondary particles is <45 nm. The compn. is particularly suitable for use in aq. media, and can be used in a sunscreen product that exhibits both effective UV protection and improved transparency. Thus, particles of TiO ₂ were obtained by the reaction of titanium dioxychloride with NaOH, followed by the addn. of sodium aluminate soln. equiv. to 9% by wt. of Al ₂ O ₃ on TiO ₂ wt. A dispersion was produced by mixing the above TiO ₂ , 18 g ethoxylated isodecyl alc., 12 g ethoxylated cetyl alc., 8 g silicone defoamer, and 185 g water.	
ST	sunscreen metal oxide nonionic surfactant	
IT	Absorptivity (UV; sunscreen compns. contg. metal oxide and nonionic surfactants)	
IT	Surfactants (nonionic; sunscreen compns. contg. metal oxide and nonionic surfactants)	
IT	Sunscreens (sun protection factor; sunscreen compns. contg. metal oxide and nonionic surfactants)	
IT	Coating materials Hydrophile-lipophile balance value Molecular weight distribution Particle size distribution Skin Sunscreens (sunscreen compns. contg. metal oxide and nonionic surfactants)	
IT	Oxides (inorganic), biological studies RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses) (sunscreen compns. contg. metal oxide and nonionic surfactants)	
IT	1344-28-1, Alumina, biological studies RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses) (sunscreen compns. contg. metal oxide and nonionic surfactants)	
IT	13463-67-7, Titanium oxide , biological studies RL: COS (Cosmetic use); FMU (Formation, unclassified); BIOL (Biological study); FORM (Formation, nonpreparative); USES (Uses) (sunscreen compns. contg. metal oxide and nonionic surfactants)	

IT **surfactants)**
 .11138-49-1, Sodium aluminate
 RL: PEP (Physical, engineering or chemical process); PYP (Physical process); PROC (Process)
 (sunscreen comps. contg. **metal oxide** and nonionic **surfactants)**

IT 13780-39-7, Titanium oxydichloride
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (sunscreen comps. contg. **metal oxide** and nonionic **surfactants)**

L5 ANSWER 9 OF 34 CAPLUS COPYRIGHT 2004 ACS on STN

Full Text	Citing References
AN 2002:776485 CAPLUS	
ED Entered STN: 11 Oct 2002	
TI Aqueous chemical growth of 3-D arrays of metal oxide nanomaterials	
AU Vayssieres, Lionel	
CS Department of Physics and Physical Chemistry, Uppsala University, SE-75121 Uppsala, Swed.	
SO Abstracts of Papers, 224th ACS National Meeting, Boston, MA, United States, August 18-22, 2002 (2002), PHYS-146 Publisher: American Chemical Society, Washington, D. C. CODEN: 69CZPZ	
DT Conference; Meeting Abstract	
LA English	
AB Ordered purpose-built nanomaterials have been obtained by a novel synthesis and theor. concept which consists of growing metal oxide thin films directly onto substrates at pptn. and dispersion conditions yielding to thermodyn. colloidal stability (i.e. low interfacial tension). Such specific state is reached by controlling exptl. (i.e. chem. and electrostatically) the interfacial tension of the system as described quant. by a thermodyn. model based on Gibbs adsorption equation. The outcome allows the fabrication of nano- to microparticulate thin films of metal oxides with controlled particle size, morphol. and nanoparticle orientation onto substrates without template or surfactant . Cryst. 1D nanorods of iron oxides (hematite and akaganeite) assembled into 3D bundles with controlled parallel and perpendicular orientation, 3D array of corundum chromium oxide- iron oxide nanocomposite, and highly oriented 3D nanorod-array of ZnO have been obtained onto various (single and polycryst.) substrates from the condensation of metal salts in aq. soln. at low temp.	

L5 ANSWER 10 OF 34 CAPLUS COPYRIGHT 2004 ACS on STN

Full Text	Citing References
AN 2002:315033 CAPLUS	
DN 136:342204	
ED Entered STN: 26 Apr 2002	
TI Method for preparing pearlescent pigment with good luster and chroma by coating metal oxides on synthesized mica	
IN Chang, Kil-Wan; Lim, Kwang-Su	
PA S. Korea	
SO PCT Int. Appl., 30 pp. CODEN: PIXXD2	
DT Patent	
LA English	
IC ICM C09C001-36	
CC 42-6 (Coatings, Inks, and Related Products)	
FAN.CNT 1	

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002033007	A1	20020425	WO 2000-KR1411	20001205
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,				

CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR,
 HU, ID, IL, IN, IS, JP, KE, KG, KP, KZ, LC, LK, LR, LS, LT, LU,
 LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD,
 SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU,
 ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
 RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY,
 DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF,
 BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

AU 2001020260	A5	20020429	AU 2001-20260	20001205
DE 10085488	T	20031224	DE 2000-10085488	20001205
JP 2004511644	T2	20040415	JP 2002-536381	20001205
US 2004096579	A1	20040520	US 2003-398814	20030409
PRAI KR 2000-60532	A	20001014		
WO 2000-KR1411	W	20001205		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 2002033007	ICM	C09C001-36
JP 2004511644	FTERM	4J037/AA26; 4J037/CA09; 4J037/DD24; 4J037/EE03; 4J037/EE04; 4J037/EE26; 4J037/EE28; 4J037/EE29; 4J037/EE33; 4J037/EE35; 4J037/EE43; 4J037/EE46; 4J037/FF09
US 2004096579	ECLA	C09C001/00F
AB		The method comprises (A) grinding a synthesized mica (e.g., JEC 1) with water to particle size 100-500 µm and sepg. the mica, (B) dispersing the sepd. mica particle in water, optionally in the presence of a surfactant , and adjusting pH to 1-4, (C) adding the metal oxide precursors (TiOCl ₂) and a basic aq. soln. to the mica dispersion while maintaining the pH range until the desired color is attained to form ≥1 hydrous metal oxide layer on the synthesized mica particle, and (D) filtering, water-washing, drying and calcining the synthesized mica coated with the metal oxide layer (e.g., TiO ₂).
ST		pearlescent pigment metal oxide coat luster; mica synthesized coating metal oxide chroma
IT		Betaines RL: NUU (Other use, unclassified); USES (Uses) (amidoalkyl, surfactant ; method for prepg. pearlescent pigment with good luster and chroma by coating metal oxides on synthesized mica)
IT		Surfactants (amphoteric; method for prepg. pearlescent pigment with good luster and chroma by coating metal oxides on synthesized mica)
IT		Surfactants (anionic; method for prepg. pearlescent pigment with good luster and chroma by coating metal oxides on synthesized mica)
IT		Surfactants (cationic; method for prepg. pearlescent pigment with good luster and chroma by coating metal oxides on synthesized mica)
IT		Pearlescent pigments (method for prepg. pearlescent pigment with good luster and chroma by coating metal oxides on synthesized mica)
IT		Oxides (inorganic), uses RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (method for prepg. pearlescent pigment with good luster and chroma by coating metal oxides on synthesized mica)
IT		Surfactants (nonionic; method for prepg. pearlescent pigment with good luster and chroma by coating metal oxides on synthesized mica)
IT		Mica-group minerals, uses RL: MOA (Modifier or additive use); PEP (Physical, engineering or chemical process); PYP (Physical process); PROC (Process); USES (Uses) (synthetic; Method for prepg. pearlescent pigment with good luster and chroma by coating metal oxides on synthesized mica)

IT 1338-43-8, Sorbitan monooleate
 .RL: NUU (Other use, unclassified); USES (Uses)
 (Monopol SP 1, **surfactant**; method for prepg. pearlescent pigment with good luster and chroma by coating **metal oxides** on synthesized mica)

IT 13463-67-7P, Titania, uses 18282-10-5P, Tin dioxide
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (method for prepg. pearlescent pigment with good luster and chroma by coating **metal oxides** on synthesized mica)

IT 1308-38-9, Chromium oxide, uses
 RL: NUU (Other use, unclassified); USES (Uses)
 (method for prepg. pearlescent pigment with good luster and chroma by coating **metal oxides** on synthesized mica)

IT 7646-78-8, Tin tetrachloride, reactions 13780-39-7, Titanium chloride oxide (TiOCl₂)
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (method for prepg. pearlescent pigment with good luster and chroma by coating **metal oxides** on synthesized mica)

IT 1309-37-1, **Iron oxide**, uses 1309-48-4, **Magnesium oxide**, uses 1313-13-9, Manganese dioxide, uses 1314-23-4, Zirconium dioxide, uses 1344-28-1, Alumina, uses
 RL: TEM (Technical or engineered material use); USES (Uses)
 (method for prepg. pearlescent pigment with good luster and chroma by coating **metal oxides** on synthesized mica)

IT 1322-93-6, Aerosol OS 2673-22-5, TR 70 12676-09-4, Aerosol C 61 415898-41-8, Mitaine CA
 RL: NUU (Other use, unclassified); USES (Uses)
 (**surfactant**; method for prepg. pearlescent pigment with good luster and chroma by coating **metal oxides** on synthesized mica)

RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

- (1) Em Industries Inc; US 6056815 A 2000 CAPLUS
- (2) Merck Patent Gesellschaft Mit Beschränkter Haftung; US 4086100 A 1978
- (3) The Mearl Corp; US 4038099 A 1977 CAPLUS

L5 ANSWER 11 OF 34 CAPLUS COPYRIGHT 2004 ACS on STN

Full Text	Citing References
AN 2001:516194 CAPLUS	
DN 135:108735	
ED Entered STN: 17 Jul 2001	
TI Colorant nanoscale particles having excellent dispersibility, their ink-jet inks, and their manufacture	
IN Zaima, Hiroaki; Matsui, Hideo	
PA Kansai Research Institute Inc., Japan	
SO Jpn. Kokai Tokkyo Koho, 10 pp.	
CODEN: JKXXAF	
DT Patent	
LA Japanese	
IC ICM C09B067-08	
ICS B41J002-01; B41M005-00; C09C001-40; C09C003-08; C09D011-00	
CC 42-12 (Coatings, Inks, and Related Products)	
FAN.CNT 1	

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2001192582	A2	20010717	JP 2000-331122	20001030
US 6527843	B1	20030304	US 2000-705283	20001102
JP 1999-312740	A	19991102		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 2001192582	ICM	C09B067-08

ICS B41J002-01; B41M005-00; C09C001-40; C09C003-08;
C09D011-00

- AB The colorant nanoscale particles, having excellent storage stability, transparency, coloring power, and dispersibility in nonpolar and polar solvents both, comprise fine particles contg. dyes and **metal oxides**, preferably **metal oxide** hydrosols, and coated with org. compds. bearing ionic groups. Thus, an aq. TiO₂ hydrosol was adsorbed with C.I. Basic Blue 26 then with Na dodecylbenzenesulfonate (SDS) to give TiO₂-SDS organosol/dye composite and subsequently dried in vacuo to give colorant particles having mean particle size 10.2 nm and CV value 12.08% and showing excellent dispersibility in PhMe, ethylene glycol di-Et ether, THF, etc., the **dispersions** being transparent and free from pptn. after 1 mo. A waterborne ink-jet ink contg. the fine particles, tetraethylene glycol monobutyl ether, glycerin, and diethylene glycol and having mean particle size 25 nm gave water-resistant vivid images with suppressed blur.
- ST colorant nanoscale particle dispersibility ink jet; nanoparticle colorant **surfactant** coated **metal oxide**; waterborne ink jet nanoparticle colorant titania; **metal oxide** support colorant nanoparticle ink; sol gel **metal oxide** nanoparticle colorant
- IT Coloring materials
(manuf. of colorant nanoparticles having excellent dispersibility for ink-jet inks)
- IT **Surfactants**
(nonionic, dye-supporting **metal oxides** coated with;
manuf. of colorant nanoparticles having excellent dispersibility for ink-jet inks)
- IT Sol-gel processing
(prepn. of **metal oxides** by, for dye supports;
manuf. of colorant nanoparticles having excellent dispersibility for ink-jet inks)
- IT 1314-13-2P, Zinc oxide, uses 1314-23-4P, Zirconia, uses 1332-29-2P, Tin oxide 1332-37-2P, **Iron oxide**, uses 1344-28-1P, Alumina, uses 11129-18-3P, Cerium oxide 13463-67-7P, Titania, uses RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(dye supports, prepd. by sol-gel process; manuf. of colorant nanoparticles having excellent dispersibility for ink-jet inks)
- IT 112-02-7, Hexadecyltrimethylammonium chloride 25155-30-0, Sodium dodecylbenzenesulfonate
RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
(dye-supporting **metal oxides** coated with; manuf. of colorant nanoparticles having excellent dispersibility for ink-jet inks)
- IT 493-52-7, Methyl red 2580-56-5, C.I. Basic Blue 26
RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
(supported on **metal oxides**, coated with **surfactants**; manuf. of colorant nanoparticles having excellent dispersibility for ink-jet inks)
- IT 1559-34-8, Tetraethylene glycol monobutyl ether
RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
(**surfactants**, colorant nanoparticles treated with; manuf. of colorant nanoparticles having excellent dispersibility for ink-jet inks)

L5 ANSWER 12 OF 34 CAPLUS COPYRIGHT 2004 ACS on STN

Full Text	Citing References
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AN 2000:540983 CAPLUS

DN 133:165231

ED Entered STN: 08 Aug 2000

TI Aqueous polymer emulsions containing functional microparticles and their use in coating of photographic films
 IN Kubo, Nobuo; Ueda, Eiichi; Shibue, Toshiaki; Kurachi, Ikuo
 PA Konica Co., Japan
 SO Jpn. Kokai Tokkyo Koho, 33 pp.
 CODEN: JKXXAF
 DT Patent
 LA Japanese
 IC ICM C08L101-14
 ICS C08J003-03; C08J003-075; C09D017-00; C09D189-00; G03C001-00; G03C001-04; G03C001-06; G03C001-32; G11B005-633; G11B005-702
 CC 42-10 (Coatings, Inks, and Related Products)
 Section cross-reference(s): 74

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2000219816	A2	20000808	JP 1999-25027	19990202
PRAI	JP 1999-25027		19990202		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 2000219816	ICM	C08L101-14
	ICS	C08J003-03; C08J003-075; C09D017-00; C09D189-00; G03C001-00; G03C001-04; G03C001-06; G03C001-32; G11B005-633; G11B005-702

AB The emulsions are obtained by dispersing a mixt. of hydrophobic high-boiling solvent(s) having b.p. $\geq 175^\circ$ and functional microparticles, or a similar mixt. also contg. hydrophobic polymer and a solvent having b.p. $\leq 160^\circ$, in an aq. soln. of hydrophilic polymer in the presence of a **surfactant**, where the functional microparticles can be elec. conductive **metal oxides** or magnetic fillers for forming antistatic or data-recording layers, etc., on image-recording materials and photog. films. Thus, mixing colloidal silica 10 with tricresyl phosphate 30, poly(Bu acrylate) 10 and AcOEt 100, dispersing with a sand mill for 2 h, combining with 500 g a 12% aq. soln. of gelatin contg. 5 g triisopropyl naphthalenesulfonate Na salt at 50° and distg. off AcOEt in vacuo using an explosion-proof device gave a **dispersion** with good storage stability. Mixing the **dispersion** with an aq. soln. of gelatin at a polymer concn. 6% and 1,2-bis(vinylsulfonylaceto)ethane at 20 mg/g-gelatin as curing agent and other additives, coating the resulting mixt. on a PET polyester film to dry thickness 3.5 μm and drying gave a coated film with good adhesion and freedom from crack.

ST photog film coating polymer emulsion; colloidal silica filler emulsion coating photog film

IT Coating materials
 Photographic films
 Photoimaging materials
 (aq. polymer emulsions contg. functional microparticles and use in coating of photog. films)

IT Gelatins, uses
 RL: TEM (Technical or engineered material use); USES (Uses)
 (aq. polymer emulsions contg. functional microparticles and use in coating of photog. films)

IT Solvents
 (high-boiling; aq. polymer emulsions contg. functional microparticles and use in coating of photog. films)

IT Coating materials
 (magnetic; aq. polymer emulsions contg. functional microparticles and use in coating of photog. films)

IT Mica-group minerals, uses
 RL: MOA (Modifier or additive use); USES (Uses)
 (microparticles; aq. polymer emulsions contg. functional microparticles)

- and use in coating of photog. films)
- IT Polyesters, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(support film; aq. polymer emulsions contg. functional microparticles and use in coating of photog. films)
- IT 1309-37-1, **Iron oxide** (Fe₂O₃), uses
RL: MOA (Modifier or additive use); USES (Uses)
(Co-contg. microparticles; aq. polymer emulsions contg. functional microparticles and use in coating of photog. films)
- IT 7631-86-9, Colloidal silica, uses 173320-42-8 219808-14-7
RL: MOA (Modifier or additive use); USES (Uses)
(aq. polymer emulsions contg. functional microparticles and use in coating of photog. films)
- IT 25267-41-8, Poly-tert-Butylacrylamide
RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
(aq. polymer emulsions contg. functional microparticles and use in coating of photog. films)
- IT 9003-39-8, Poly(N-vinyl-2-pyrrolidone) 9003-49-0, Poly(butyl acrylate)
RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)
(aq. polymer emulsions contg. functional microparticles and use in coating of photog. films)
- IT 66710-66-5, 1,2-Bis(vinylsulfonylacetamido)ethane
RL: MOA (Modifier or additive use); USES (Uses)
(hardener; aq. polymer emulsions contg. functional microparticles and use in coating of photog. films)
- IT 84-74-2, Dibutyl phthalate 1323-65-5, Dinonylphenol 1330-78-5, Tricresyl phosphate
RL: NUU (Other use, unclassified); USES (Uses)
(high-boiling solvent; aq. polymer emulsions contg. functional microparticles and use in coating of photog. films)
- IT 9012-09-3, Cellulose triacetate 24968-11-4 25038-59-9, PET polyester, uses 25853-85-4, Dimethyl 2,6-naphthalenedicarboxylate-ethylene glycol copolymer
RL: TEM (Technical or engineered material use); USES (Uses)
(support film; aq. polymer emulsions contg. functional microparticles and use in coating of photog. films)
- IT 1323-19-9, Sodium Triisopropyl naphthalenesulfonate
RL: MOA (Modifier or additive use); USES (Uses)
(**surfactant**; aq. polymer emulsions contg. functional microparticles and use in coating of photog. films)

L5 ANSWER 13 OF 34 CAPLUS COPYRIGHT 2004 ACS on STN

Full Text	Citing References
AN 2000:133630	CAPLUS
DN 132:168337	
ED Entered STN: 25 Feb 2000	
TI Compositions for forming transparent conductive nanoparticle coatings and their preparation	
IN Aikens, John H.; Sarkas, Harry W.; Brotzman, Richard W., Jr.; Helvoigt, Sara	
PA Nanophase Technologies Corp., USA	
SO PCT Int. Appl., 25 pp.	
CODEN: PIXXD2	
DT Patent	
LA English	
IC C01G019-00; C01B013-14; C03C017-25; H01L031-18; H01B001-0	
CC 49-3 (Industrial Inorganic Chemicals)	
Section cross-reference(s): 38, 42, 52, 73, 76	
FAN.CNT 1	

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PI WO 2000009446 A1 20000224 WO 1999-US18677 19990816
 W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ,
 DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS,
 JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK,
 MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ,
 TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ,
 MD, RU, TJ, TM
 RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK,
 ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG,
 CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG
 US 6416818 B1 20020709 US 1999-374751 19990813
 CA 2340751 AA 20000224 CA 1999-2340751 19990816
 AU 9955675 A1 20000306 AU 1999-55675 19990816
 AU 758075 B2 20030313
 EP 1109741 A1 20010627 EP 1999-942253 19990816
 R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
 IE, SI, LT, LV, FI, RO
 JP 2003527454 T2 20030916 JP 2000-564901 19990816
 PRAI US 1998-96829P P 19980817
 US 1999-374751 A 19990813
 WO 1999-US18677 W 19990816

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 2000009446	IC	C01G019-00IC C01B013-14IC C03C017-25IC H01L031-18IC H01B001-0
WO 2000009446	ECLA	C01B013/14B; C03C017/10; C03C017/25; H01B001/20; H01L031/18J
US 6416818	ECLA	C03C017/10; C03C017/25
AB		A substantially stable aq. dispersion of metal or metal oxide particles is used in forming a transparent conductive coating. The process comprises (a) adding a nanocryst. material to water, the nanocryst. material comprising primary particles of metal or metal oxide having a substantially spherical shape and (b) mixing the nanocryst. material and water to form an aq. dispersion . The substantially stable aq. dispersion is useful in forming a transparent conductive coating using film forming agents. The films may be coated with silane monomers or oligomers, and cured, e.g., at 300-800°C.
ST		transparent conductive coating nanoparticle dispersion ; antistatic coating nanoparticle dispersion
IT		Polyethers, processes RL: DEV (Device component use); PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses) (aliph., film forming agents; compns. for forming transparent conductive nanoparticle coatings and their prepn.)
IT		Coating materials (antistatic; compns. for forming transparent conductive nanoparticle coatings and their prepn.)
IT		Nanoparticles Semiconductor films (compns. for forming transparent conductive nanoparticle coatings and their prepn.)
IT		Coating materials (elec. conductive, transparent; compns. for forming transparent conductive nanoparticle coatings and their prepn.)
IT		Alcohols, processes Fatty acids, processes RL: DEV (Device component use); PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses) (ethoxylated, film forming agents; compns. for forming transparent conductive nanoparticle coatings and their prepn.)
IT		Surfactants

(film forming agents; compns. for forming transparent conductive nanoparticle coatings and their prepn.)

IT Phosphates, processes
Polyoxyalkylenes, processes
Polysilanes
Polysiloxanes, processes
Silanes
Silicates, processes
RL: DEV (Device component use); PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)
(film forming agents; compns. for forming transparent conductive nanoparticle coatings and their prepn.)

IT 1312-43-2, Indium oxide 1317-38-0, Copper oxide CuO, processes
1332-29-2, Tin oxide 1332-37-2, **Iron oxide**, processes 7440-05-3, Palladium, processes 7440-06-4, Platinum, processes 7440-22-4, Silver, processes 7440-57-5, Gold, processes 12673-86-8, Antimony tin oxide 50926-11-9, Indium tin oxide
RL: DEV (Device component use); PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)
(compns. for forming transparent conductive nanoparticle coatings and their prepn.)

IT 1333-74-0, Hydrogen, processes 7440-37-1, Argon, processes 7727-37-9, Nitrogen, processes
RL: NUU (Other use, unclassified); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)
(compns. for forming transparent conductive nanoparticle coatings and their prepn.)

IT 78-10-4, TEOS 681-84-5, TMOS
RL: NUU (Other use, unclassified); PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)
(compns. for forming transparent conductive nanoparticle coatings and their prepn.)

IT 56-81-5D, Glycerol, esters 7664-38-2D, Phosphoric acid, esters, processes 9002-89-5, Polyvinyl alcohol 9004-34-6, Cellulose, processes 25322-68-3, Polyethylene glycol
RL: DEV (Device component use); PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)
(film forming agents; compns. for forming transparent conductive nanoparticle coatings and their prepn.)

RE.CNT 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE
(1) Eichorst Dennis, J; US 5866287 A 1999 CAPLUS
(2) Lagaly, G; ULLMANN'S ENCYCLOPEDIA OF INDUSTRIAL CHEMISTRY chapter 2 1986, P342

L5 ANSWER 14 OF 34 CAPLUS COPYRIGHT 2004 ACS on STN

	Full Text	Citing References
AN	2000:53357	CAPLUS
DN	132:97871	
ED	Entered STN: 23 Jan 2000	
TI	Sunscreen composition containing an anionic surfactant , compositions filtering ultraviolet radiation and an amphiphilic cationic or dipolar ion compound	
IN	Allard, Delphine; Candau, Didier; Morgantini, Luc	
PA	L'Oreal, Fr.	
SO	PCT Int. Appl., 38 pp. CODEN: PIXXD2	
DT	Patent	
LA	French	

IC ICM A61K007-42
 CC .62-4 (Essential Oils and Cosmetics)
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2000002529	A1	20000120	WO 1999-FR1608	19990705
	W: AU, BR, CA, CN, CZ, HU, JP, KR, MX, PL, RU, US				
	RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	FR 2780879	A1	20000114	FR 1998-8828	19980709
	FR 2780879	B1	20020920		
	CA 2303337	AA	20000120	CA 1999-2303337	19990705
	AU 9946221	A1	20000201	AU 1999-46221	19990705
	AU 738645	B2	20010920		
	EP 1011624	A1	20000628	EP 1999-929393	19990705
	EP 1011624	B1	20031112		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
	BR 9906592	A	20000718	BR 1999-6592	19990705
	JP 2002520264	T2	20020709	JP 2000-558791	19990705
	AT 253888	E	20031115	AT 1999-929393	19990705
	ES 2205842	T3	20040501	ES 1999-929393	19990705
	US 6375936	B1	20020423	US 2000-486240	20000224
PRAI	FR 1998-8828	A	19980709		
	WO 1999-FR1608	W	19990705		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 2000002529	ICM	A61K007-42
WO 2000002529	ECLA	A61K007/42; A61K008/04H; A61Q017/04
FR 2780879	ECLA	A61K007/42; A61K008/04H; A61Q017/04

OS MARPAT 132:97871

AB A cosmetic compn., in particular for skin and/or hair protection, in the form of a **dispersion** comprise two non-miscible phases stabilized by at least an anionic **surfactant** selected among the salts of fatty acid and of monovalent or polyvalent metals, of ammonium or org. bases, a compd. filtering UV radiation capable of being adsorbed at the interface of said non-miscible phases, derived from benzylidene camphor and comprising at least a sulfonic acid function partially or completely neutralized, a **metal oxide** nanopigment coated with hydrocarbon hydrophobic agents and an amphiphilic cationic or dipolar ion compd. which leads with the anionic **surfactant** to the formation of a compd. capable of lowering the water/paraffin oil interfacial tension at 40° by more than 14 mN.m-1 for an anionic **surfactant** concn. of 0.1 mmole/100g, by more than 26mN.m-1 for an anionic **surfactant** concn. of 0.5 mmole/100g and by more than 33 mN.m-1 for an anionic **surfactant** concn. of 1 mmole/100g. A sunscreen emulsion contained Arlacel 165 2, stearic acid 2.5, cetyl alc. 0.5, polydimethylsiloxane 5.5, fatty acid triglycerides 4, isoparaffin 3, karite butter 1.5, jojoba oil 1.5, **titanium oxide** nanopigment 5, Uvinul N 539 10, Parsol-1789 2, glycerin 4, propylene glycol 4, benzene 1,4-[di(3-methylidenecampho-10-sulfonic)] acid 0.5%. cocobetaine 2, Pemulen TR1 0.12, hydroxypropylmethyl cellulose 0.1, triethanolamine 0.83, preservatives q.s., perfume q.s., and water q.s. 100%.

ST sunscreen anionic **surfactant** UV radiation filter

IT Quaternary ammonium compounds, biological studies

RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)

(C16-18-alkylbenzylidimethyl; sunscreen compn. contg. anionic **surfactant**, compns. filtering UV radiation and amphiphilic cationic or dipolar ion compd.)

IT Phenols, biological studies

RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)

(alkyl; sunscreen compn. contg. anionic **surfactant**, compns.)

- filtering UV radiation and amphiphilic cationic or dipolar ion compd.)
- IT Quaternary ammonium compounds, biological studies
 RL: BUU (Biological use, unclassified); BIOL (Biological study); USES
 (Uses)
 (alkylbenzyl dimethyl, bromides; sunscreen compn. contg. anionic **surfactant**, compns. filtering UV radiation and amphiphilic cationic or dipolar ion compd.)
- IT Quaternary ammonium compounds, biological studies
 RL: BUU (Biological use, unclassified); BIOL (Biological study); USES
 (Uses)
 (alkylbenzyl dimethyl, chlorides; sunscreen compn. contg. anionic **surfactant**, compns. filtering UV radiation and amphiphilic cationic or dipolar ion compd.)
- IT Quaternary ammonium compounds, biological studies
 RL: BUU (Biological use, unclassified); BIOL (Biological study); USES
 (Uses)
 (alkylbenzyl dimethyl, saccharinates; sunscreen compn. contg. anionic **surfactant**, compns. filtering UV radiation and amphiphilic cationic or dipolar ion compd.)
- IT Amphoteric materials
 (amphiphilic; sunscreen compn. contg. anionic **surfactant**, compns. filtering UV radiation and amphiphilic cationic or dipolar ion compd.)
- IT **Surfactants**
 (anionic; sunscreen compn. contg. anionic **surfactant**, compns. filtering UV radiation and amphiphilic cationic or dipolar ion compd.)
- IT Betaines
 RL: BUU (Biological use, unclassified); BIOL (Biological study); USES
 (Uses)
 (cocamidopropyl derivs.; sunscreen compn. contg. anionic **surfactant**, compns. filtering UV radiation and amphiphilic cationic or dipolar ion compd.)
- IT Cosmetics
 (emollients; sunscreen compn. contg. anionic **surfactant**, compns. filtering UV radiation and amphiphilic cationic or dipolar ion compd.)
- IT Fatty acids, biological studies
 Glycols, biological studies
 Polyoxyalkylenes, biological studies
 RL: BUU (Biological use, unclassified); BIOL (Biological study); USES
 (Uses)
 (esters; sunscreen compn. contg. anionic **surfactant**, compns. filtering UV radiation and amphiphilic cationic or dipolar ion compd.)
- IT Amides, biological studies
 RL: BUU (Biological use, unclassified); BIOL (Biological study); USES
 (Uses)
 (ethoxylated; sunscreen compn. contg. anionic **surfactant**, compns. filtering UV radiation and amphiphilic cationic or dipolar ion compd.)
- IT Alcohols, biological studies
 RL: BUU (Biological use, unclassified); BIOL (Biological study); USES
 (Uses)
 (fatty, ethoxylated; sunscreen compn. contg. anionic **surfactant**, compns. filtering UV radiation and amphiphilic cationic or dipolar ion compd.)
- IT Carboxylic acids, biological studies
 RL: BUU (Biological use, unclassified); BIOL (Biological study); USES
 (Uses)
 (hydroxy; sunscreen compn. contg. anionic **surfactant**, compns. filtering UV radiation and amphiphilic cationic or dipolar ion compd.)
- IT Onium compounds
 RL: BUU (Biological use, unclassified); BIOL (Biological study); USES
 (Uses)
 (imidazolium compds., benzylcocoacylhydroxyethyl; sunscreen compn.

contg. anionic **surfactant**, compns. filtering UV radiation and amphiphilic cationic or dipolar ion compd.)

IT Radicals, biological studies
 RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
 (inhibitors; sunscreen compn. contg. anionic **surfactant**, compns. filtering UV radiation and amphiphilic cationic or dipolar ion compd.)

IT Cosmetics
 (moisturizers; sunscreen compn. contg. anionic **surfactant**, compns. filtering UV radiation and amphiphilic cationic or dipolar ion compd.)

IT Solvents
 (org.; sunscreen compn. contg. anionic **surfactant**, compns. filtering UV radiation and amphiphilic cationic or dipolar ion compd.)

IT Fatty acids, biological studies
 RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
 (salts; sunscreen compn. contg. anionic **surfactant**, compns. filtering UV radiation and amphiphilic cationic or dipolar ion compd.)

IT Antioxidants
 Gelation agents
 Opacifiers
 Perfumes
 Preservatives
 Propellants (sprays and foams)
 Reducing agents
 Sequestering agents
 Stabilizing agents
 Sunscreens
 Thickening agents
 UV A radiation
 UV B radiation
 (sunscreen compn. contg. anionic **surfactant**, compns. filtering UV radiation and amphiphilic cationic or dipolar ion compd.)

IT Ceramides
 Glycerides, biological studies
 Oxides (inorganic), biological studies
 Polymers, biological studies
 Polysiloxanes, biological studies
 Sulfobetaines
 Vitamins
 RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
 (sunscreen compn. contg. anionic **surfactant**, compns. filtering UV radiation and amphiphilic cationic or dipolar ion compd.)

IT 56-81-5D, Glycerol, esters 57-09-0, Cetyltrimethylammonium bromide 57-50-1D, Saccharose, esters 96-55-9, Decyl betaine 104-74-5, Laurylpyridinium chloride 107-43-7D, Betaine, cocoacyl derivs. 112-00-5, Dodecyltrimethylammonium chloride 112-03-8, Stearyltrimethylammonium chloride 122-18-9, Cetalkonium chloride 122-19-0, Stearalkonium chloride 138-32-9, Cetyltrimethylammonium tosylate 593-81-7, Trimethylammonium chloride 593-81-7D, Trimethylammonium chloride, cocoacyl derivs. 683-10-3, Lauryl betaine 693-33-4, Cetyl betaine 820-66-6 871-37-4, Oleyl betaine 1119-94-4, Dodecyltrimethylammonium bromide 1314-13-2, Zinc oxide, biological studies 1314-23-4, Zirconium oxide, biological studies 1332-37-2, **Iron oxide**, biological studies 1406-18-4, Vitamine 2601-33-4 4292-10-8, Lauramidopropyl betaine 6179-44-8 6197-30-4, Uvinul N 539 6917-36-8D, Pentitol, esters 7541-59-5D, Tetritol, esters 9005-63-4D, Polyoxyethylene sorbitan, esters 11129-18-3, Cerium oxide 12441-09-7D, Sorbitan, fatty acid esters 13463-67-7, Titanium dioxide, biological studies 16766-82-8D, benzalkonium salts 16841-14-8, Behenalkonium chloride 17301-53-0, Behenyltrimethylammonium chloride

25054-76-6, Oleamidopropyl betaine 25322-68-3D, Peg, esters
 25618-55-7D, Polyglycerol, esters 26920-62-7, Behenyl betaine
 32954-43-1 37139-99-4, Olealkonium chloride 45007-61-2D, Hexitol,
 esters 59272-84-3, Myristamidopropyl betaine 62281-04-3 65060-02-8,
 Cetyltrimethylammonium methosulfate 70356-09-1 71850-81-2
 81646-13-1, Behenyltrimethylammonium methosulfate 84750-06-1, Arlacel
 165 138789-85-2, Pemulen TR1 157101-46-7, Lauralkonium bromide
 191226-60-5

RL: BUU (Biological use, unclassified); BIOL (Biological study); USES
 (Uses)

(sunscreen compn. contg. anionic **surfactant**, compns.)

filtering UV radiation and amphiphilic cationic or dipolar ion compd.)

RE.CNT 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

- (1) Anon; CAPLUS
- (2) Deckner, G; US 4970216 A 1990 CAPLUS
- (3) L 'Oreal; EP 0603080 A 1994 CAPLUS
- (4) Lion Corp; JP 06072830 A 1994 CAPLUS
- (5) Marschner, F; US 5045307 A 1991 CAPLUS
- (6) Patel, A; US 5348736 A 1994 CAPLUS
- (7) The Procter & Gamble Co; WO 9728785 A 1997 CAPLUS
- (8) Unilever Plc; EP 0386898 A 1990 CAPLUS

L5 ANSWER 15 OF 34 CAPLUS COPYRIGHT 2004 ACS on STN

Full Citing
Text References

AN 1999:818991 CAPLUS

DN 132:69087

ED Entered STN: 30 Dec 1999

TI Cosmetic sunscreen composition containing a **metal oxide** nanopigment
 and an acrylic terpolymer

IN Candau, Didier; Hansenne, Isabelle

PA L'Oreal, Fr.

SO Eur. Pat. Appl., 13 pp.

CODEN: EPXXDW

DT Patent

LA French

IC ICM A61K007-48

ICS A61K007-06; A61K007-42

CC 62-4 (Essential Oils and Cosmetics)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 966954	A1	19991229	EP 1999-401429	19990611
	EP 966954	B1	20020220		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
	FR 2779637	A1	19991217	FR 1998-7511	19980615
	FR 2779637	B1	20000901		
	AU 712176	B1	19991028	AU 1999-33963	19990609
	KR 2000006055	A	20000125	KR 1999-21477	19990610
	RU 2181997	C2	20020510	RU 1999-112558	19990610
	AT 213404	E	20020315	AT 1999-401429	19990611
	ES 2168837	T3	20020616	ES 1999-401429	19990611
	PT 966954	T	20020830	PT 1999-401429	19990611
	CN 1247058	A	20000315	CN 1999-111269	19990614
	BR 9902762	A	20000509	BR 1999-2762	19990614
	US 6060041	A	20000509	US 1999-332007	19990614
	MX 9905505	A	20000731	MX 1999-5505	19990614
	CA 2274749	AA	19991215	CA 1999-2274749	19990615
	JP 2000026264	A2	20000125	JP 1999-168299	19990615
PRAI	FR 1998-7511	A	19980615		

CLASS

PATENT NO. CLASS PATENT FAMILY CLASSIFICATION CODES

EP 966954 . ICM A61K007-48
ICS A61K007-06; A61K007-42

EP 966954 ECLA A61K008/19; A61K008/27; A61K008/28; A61K008/29;
A61K008/81K4; A61Q017/04

FR 2779637 ECLA A61K008/19; A61K008/27; A61K008/28; A61K008/29;
A61K008/81K4; A61Q017/04

US 6060041 ECLA A61K007/06G2; A61K007/42C; A61K007/48N

AB The title compn. is disclosed. The size of **metal oxide** nanopigments, e.g. **titanium oxide**, is 5-100 nm. A gel-cream sunscreen contained a 25% **dispersion** of methacrylic acid-Me acrylate-ethoxylated behenyl dimethylmetaisopropenylbenzyl isocyanate terpolymer 0.6, C12-15 alkyl benzoate 25, a mixt. of Me, Et, Pr, Bu, iso-Bu p-hydroxybenzoate/phenoxy-2 ethanol 1, **titanium oxide** coated with aluminum/aluminum stearate (MT 100T) 5, triethanolamine 0.48, and water q.s. 100 g.

ST cosmetic sunscreen **metal oxide** acrylic terpolymer

IT Polysiloxanes, biological studies
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(Me hydrogen; cosmetic sunscreen compn. contg. **metal oxide** nanopigment and acrylic terpolymer)

IT Alcohols, biological studies
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(amino; cosmetic sunscreen compn. contg. **metal oxide** nanopigment and acrylic terpolymer)

IT **Surfactants**
(anionic; cosmetic sunscreen compn. contg. **metal oxide** nanopigment and acrylic terpolymer)

IT Antioxidants
Beeswax
Gelation agents
Hair preparations
Perfumes
Preservatives
Reducing agents
Sequestering agents
Sunscreens
Surfactants
Thickening agents
(cosmetic sunscreen compn. contg. **metal oxide** nanopigment and acrylic terpolymer)

IT Radicals, biological studies
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(cosmetic sunscreen compn. contg. **metal oxide** nanopigment and acrylic terpolymer)

IT Acids, biological studies
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(cosmetic sunscreen compn. contg. **metal oxide** nanopigment and acrylic terpolymer)

IT Acrylic polymers, biological studies
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(cosmetic sunscreen compn. contg. **metal oxide** nanopigment and acrylic terpolymer)

IT Alkali metal hydroxides
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(cosmetic sunscreen compn. contg. **metal oxide** nanopigment and acrylic terpolymer)

IT Amino acids, biological studies
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)

(cosmetic sunscreen compn. contg. **metal oxide**
nanopigment and acrylic terpolymer)

IT Ceramides
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES
(Uses)
(cosmetic sunscreen compn. contg. **metal oxide**
nanopigment and acrylic terpolymer)

IT Fatty acids, biological studies
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES
(Uses)
(cosmetic sunscreen compn. contg. **metal oxide**
nanopigment and acrylic terpolymer)

IT Lecithins
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES
(Uses)
(cosmetic sunscreen compn. contg. **metal oxide**
nanopigment and acrylic terpolymer)

IT Metal alkoxides
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES
(Uses)
(cosmetic sunscreen compn. contg. **metal oxide**
nanopigment and acrylic terpolymer)

IT Polysiloxanes, biological studies
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES
(Uses)
(cosmetic sunscreen compn. contg. **metal oxide**
nanopigment and acrylic terpolymer)

IT Proteins, general, biological studies
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES
(Uses)
(cosmetic sunscreen compn. contg. **metal oxide**
nanopigment and acrylic terpolymer)

IT Hair preparations
(creams; cosmetic sunscreen compn. contg. **metal oxide**
nanopigment and acrylic terpolymer)

IT Cosmetics
(emollients; cosmetic sunscreen compn. contg. **metal oxide**
nanopigment and acrylic terpolymer)

IT Alcohols, biological studies
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES
(Uses)
(fatty; cosmetic sunscreen compn. contg. **metal oxide**
nanopigment and acrylic terpolymer)

IT Hair preparations
Sunscreens
(gels; cosmetic sunscreen compn. contg. **metal oxide**
nanopigment and acrylic terpolymer)

IT Cosmetics
(makeups; cosmetic sunscreen compn. contg. **metal oxide**
nanopigment and acrylic terpolymer)

IT Solvents
(org.; cosmetic sunscreen compn. contg. **metal oxide**
nanopigment and acrylic terpolymer)

IT Fatty acids, biological studies
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES
(Uses)
(potassium salts; cosmetic sunscreen compn. contg. **metal oxide**
nanopigment and acrylic terpolymer)

IT Fatty acids, biological studies
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES
(Uses)
(salts, iron and aluminum; cosmetic sunscreen compn. contg.
metal oxide nanopigment and acrylic terpolymer)

IT Fatty acids, biological studies

Polyphosphoric acids
 RL: BUU (Biological use, unclassified); BIOL (Biological study); USES
 (Uses)
 (sodium salts; cosmetic sunscreen compn. contg. **metal oxide** nanopigment and acrylic terpolymer)

IT Cosmetics
 (sprays; cosmetic sunscreen compn. contg. **metal oxide** nanopigment and acrylic terpolymer)

IT Sunscreens
 (sticks; cosmetic sunscreen compn. contg. **metal oxide** nanopigment and acrylic terpolymer)

IT Hair preparations
 (sunscreens; cosmetic sunscreen compn. contg. **metal oxide** nanopigment and acrylic terpolymer)

IT Fatty acids, biological studies
 RL: BUU (Biological use, unclassified); BIOL (Biological study); USES
 (Uses)
 (zinc salts; cosmetic sunscreen compn. contg. **metal oxide** nanopigment and acrylic terpolymer)

IT 57-11-4, Stearic acid, biological studies 57-11-4D, Stearic acid, reaction products with silicon 94-13-3, Propyl p-hydroxybenzoate 94-26-8, Butyl p-hydroxybenzoate 96-26-4, Dihydroxyacetone 99-76-3, Methyl p-hydroxybenzoate 102-71-6, Triethanolamine, biological studies 120-47-8, Ethyl p-hydroxybenzoate 557-05-1, Zinc stearate 637-12-7, Aluminum stearate 1314-13-2, Zinc oxide, biological studies 1314-23-4, Zirconium oxide, biological studies 1332-37-2, **Iron oxide**, biological studies 1344-28-1, Alumina, biological studies 3429-76-3 4247-02-3, Isobutyl p-hydroxybenzoate 5136-76-5, Iron stearate 7230-93-5, Aluminum laurate 7440-21-3D, Silicon, reaction products with stearic acid, biological studies 7631-86-9, Silicon oxide, biological studies 9002-88-4, Polyethylene 9016-00-6, Poly[oxy(dimethylsilylene)] 11129-18-3, Cerium oxide 13463-67-7, **Titanium oxide**, biological studies 126879-38-7, MT 100T 138789-85-2, Pemulen tr1 253157-48-1
 RL: BUU (Biological use, unclassified); BIOL (Biological study); USES
 (Uses)
 (cosmetic sunscreen compn. contg. **metal oxide** nanopigment and acrylic terpolymer)

RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD
 RE
 (1) Coatex; EP 0350414 A 1990 CAPLUS
 (2) Coatex; EP 0577526 A 1994 CAPLUS
 (3) Union Carbide Chemicals & Plastics Technology; WO 9324544 A 1993 CAPLUS

L5 ANSWER 16 OF 34 CAPLUS COPYRIGHT 2004 ACS on STN

Full Text	Citing References
AN 1999:659557	CAPLUS
DN 131:287937	
ED Entered STN: 15 Oct 1999	
TI Deacidification of cellulose-based materials using alkaline particles in hydrofluoroether carriers	
IN Leiner, Lee H.; Burd, James E.; Gaydos, Robert M.	
PA Preservation Technologies, L.P., USA	
SO PCT Int. Appl., 23 pp.	
CODEN: PIXXD2	
DT Patent	
LA English	
IC ICM D21H025-18	
ICS D21H017-06; D21H017-11	
CC 43-7 (Cellulose, Lignin, Paper, and Other Wood Products)	
Section cross-reference(s): 20	
FAN.CNT 1	
PATENT NO.	KIND DATE APPLICATION NO. DATE

PI	WO 9951819	A1	19991014	WO 1999-US6596	19990325
	W: AU, CA, JP, KR				
	RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	US 6080448	A	20000627	US 1998-54690	19980403
	CA 2326998	AA	19991014	CA 1999-2326998	19990325
	AU 9932050	A1	19991025	AU 1999-32050	19990325
	AU 743868	B2	20020207		
	EP 1068395	A1	20010117	EP 1999-914148	19990325
	EP 1068395	B1	20020904		
	R: AT, BE, CH, DE, ES, FR, GB, GR, IT, LI, NL, PT, IE				
	JP 2002510758	T2	20020409	JP 2000-542527	19990325
	AT 223535	E	20020915	AT 1999-914148	19990325
	PT 1068395	T	20021129	PT 1999-914148	19990325
	ES 2183536	T3	20030316	ES 1999-914148	19990325
	US 6342098	B1	20020129	US 2000-570579	20000512
PRAI	US 1998-54690	A	19980403		
	WO 1999-US6596	W	19990325		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 9951819	ICM	D21H025-18
	ICS	D21H017-06; D21H017-11
US 6080448	ECLA	D21H025/18
AB	Books, imaged paper and other imaged materials having a cellulose base are deacidified by treatment with alk. particles of a basic metal oxide , hydroxide or salt dispersed in a hydrofluoroether carrier, alone or in combination with a perfluorinated carrier, and a surfactant for a sufficient time to raise the pH of the materials. Thus, 25% rag bond paper having initial pH 5.5 was dipped in a dispersion of 0.3 g/L MgO and 0.075 g/L Fomblin monoacid (perfluoropolyoxyether alkanolic acid) in HFE 7100 for 15 min at room temp. and dried, giving pH 9.9 and alk. reserve 1.75 wt.% (CaCO ₃ equiv.).	
ST	deacidification cellulosic material alk particle hydrofluoroether; paper deacidification magnesium oxide perfluoropolyoxyether alkanolate; fluoromethoxybutane carrier magnesium oxide paper deacidification	
IT	Books Paper Surfactants (deacidification of cellulose-based materials using alk. particles in hydrofluoroether carriers)	
IT	Hydroxides (inorganic) Oxides (inorganic), uses Salts, uses RL: MOA (Modifier or additive use); USES (Uses) (deacidification of cellulose-based materials using alk. particles in hydrofluoroether carriers)	
IT	Polyoxyalkylenes, uses RL: NUU (Other use, unclassified); USES (Uses) (fluorine-contg., fatty esters, surfactant ; deacidification of cellulose-based materials using alk. particles in hydrofluoroether carriers)	
IT	Ethers, uses RL: NUU (Other use, unclassified); USES (Uses) (fluoroalkyl; deacidification of cellulose-based materials using alk. particles in hydrofluoroether carriers)	
IT	Carboxylic acids, uses RL: NUU (Other use, unclassified); USES (Uses) (hydroxy, alkoxylated, perfluoroalkyl ethers, Fomblin Monoacid, surfactant ; deacidification of cellulose-based materials using alk. particles in hydrofluoroether carriers)	
IT	Polyoxyalkylenes, uses RL: NUU (Other use, unclassified); USES (Uses)	

(perfluoro, fatty esters, **surfactant**; deacidification of cellulose-based materials using alk. particles in hydrofluoroether carriers)

IT Fluoropolymers, uses
Fluoropolymers, uses
RL: NUU (Other use, unclassified); USES (Uses)
(polyoxyalkylene-, fatty esters, **surfactant**; deacidification of cellulose-based materials using alk. particles in hydrofluoroether carriers)

IT 1309-48-4, Magnesium oxide, uses 1314-13-2, Zinc oxide, uses
RL: MOA (Modifier or additive use); USES (Uses)
(deacidification of cellulose-based materials using alk. particles in hydrofluoroether carriers)

IT 219484-64-7, HFE 7100
RL: NUU (Other use, unclassified); USES (Uses)
(deacidification of cellulose-based materials using alk. particles in hydrofluoroether carriers)

RE.CNT 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

(1) Kato, H; JP 10046497 A 1998 CAPLUS
(2) Kundrot, R; US 4522843 A 1985
(3) Leiner, L; US 5409736 A 1995 CAPLUS
(4) Preservation Tech Inc; WO 9726409 A 1997
(5) Smith, R; WO 8700217 A 1987 CAPLUS
(6) Syremont Spa; EP 0543372 A 1993

L5 ANSWER 17 OF 34 CAPLUS COPYRIGHT 2004 ACS on STN

Full Text	Citing References
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AN	1998:788661	CAPLUS		
DN	130:43067			
ED	Entered STN: 16 Dec 1998			
TI	In-situ groundwater remediation by selective colloid mobilization			
IN	Seaman, John C.; Bertch, Paul M.			
PA	University of Georgia Research Foundation, USA			
SO	U.S., 9 pp. CODEN: USXXAM			
DT	Patent			
LA	English			
IC	ICM C02F001-52			
NCL	210724000			
CC	61-5 (Water)			
FAN.CNT	1			
	PATENT NO.	KIND DATE APPLICATION NO. DATE		
	-----	-----	-----	-----
PI	US 5846434	A	19981208	US 1997-808253 19970228
PRAI	US 1997-808253		19970228	

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
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US 5846434	ICM	C02F001-52
	NCL	210724000

AB An in-situ groundwater remediation pump and treat technique effective for reclamation of aquifers that have been contaminated with a mixed, metal-contg. waste, which promotes selective mobilization of **metal oxide** colloids with a cationic **surfactant**, preferably a quaternary alkylammonium **surfactant**, without significantly reducing formation permeability that often accompanies large-scale colloid **dispersion**, thus increasing the efficiency of the remediation effort by enhancing the capture of strongly sorbing contaminants assocd. with the oxide phases. The resulting suspension can be sepd. from the bulk soln. with controlled pH adjustments to destabilize the oxide colloids, and a clear supernatant which results that can be recycled through the injection well without

further waste treatment.

ST in situ groundwater remediation colloid mobilization

IT Quaternary ammonium compounds, uses
 RL: NUU (Other use, unclassified); USES (Uses)
 (alkyl; in-situ groundwater remediation by selective colloid mobilization)

IT **Surfactants**
 (cationic; in-situ groundwater remediation by selective colloid mobilization)

IT Water purification
 (flocculation; in-situ groundwater remediation by selective colloid mobilization)

IT Water pollution
 (groundwater, remediation of; in-situ groundwater remediation by selective colloid mobilization)

IT Aquifers
 Groundwaters
 (in-situ groundwater remediation by selective colloid mobilization)

IT Alkali metal hydroxides
 Alkaline earth hydroxides
 RL: MOA (Modifier or additive use); USES (Uses)
 (in-situ groundwater remediation by selective colloid mobilization)

IT Phyllosilicate minerals
 RL: PEP (Physical, engineering or chemical process); PROC (Process)
 (in-situ groundwater remediation by selective colloid mobilization)

IT Colloids
 (**metal oxide**; in-situ groundwater remediation by selective colloid mobilization)

IT Clays, processes
 RL: PEP (Physical, engineering or chemical process); PROC (Process)
 (phyllosilicate; in-situ groundwater remediation by selective colloid mobilization)

IT Groundwater pollution
 (remediation of; in-situ groundwater remediation by selective colloid mobilization)

IT Water purification
 (settling; in-situ groundwater remediation by selective colloid mobilization)

IT 1305-62-0, Calcium hydroxide, uses 1310-58-3, Potassium hydroxide, uses 1310-73-2, Sodium hydroxide, uses
 RL: MOA (Modifier or additive use); USES (Uses)
 (in-situ groundwater remediation by selective colloid mobilization)

IT 51-92-3, Tetramethylammonium 66-40-0, Tetraethylammonium 3426-74-2, Trimethylphenylammonium 10182-92-0, Tetradecyltrimethylammonium 14800-24-9, Benzyltrimethylammonium 16287-71-1, Benzyltrimethyltetradecylammonium 16652-03-2, Benzyltriethylammonium
 RL: NUU (Other use, unclassified); USES (Uses)
 (in-situ groundwater remediation by selective colloid mobilization)

IT 1332-37-2, **Iron oxide**, processes 1344-28-1, Alumina, processes 11129-60-5, Manganese oxide
 RL: PEP (Physical, engineering or chemical process); PROC (Process)
 (in-situ groundwater remediation by selective colloid mobilization)

RE.CNT 25 THERE ARE 25 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

- (1) Bateson; US 5303871 1994
- (2) Bernard; US 2894905 1959 CAPLUS
- (3) Boyd; US 5401418 1995 CAPLUS
- (4) Buddemeier, R; Applied Geochemistry 1988, V3, P535 CAPLUS
- (5) Corey; US 5263795 1993
- (6) Coston, J; Geochimica et Cosmochimica Acta 1995, V59(17), P3535 CAPLUS
- (7) Danner; US 5130358 1992 CAPLUS
- (8) Dentel; US 5401417 1995 CAPLUS
- (9) Gaden; US 3054746 1962 CAPLUS
- (10) Gallup; US 5409614 1995 CAPLUS

- (11) Gill; US 5407583 1995 CAPLUS
 (12) Grant; US 5275739 1994 CAPLUS
 (13) Grant; US 5324433 1994 CAPLUS
 (14) Holdar; US 5447638 1995 CAPLUS
 (15) Jaffe; US 5458437 1995 CAPLUS
 (16) Kapan, D; Environ Sci Technol 1994, V28(6)
 (17) Lomasney; US 5405509 1995 CAPLUS
 (18) Manchak; US 5348422 1994
 (19) Manning; US 5000858 1991 CAPLUS
 (20) McCarthy, J; Environ Sci Technol 1989, V23(5), P496 CAPLUS
 (21) Neff; US 5152903 1992 CAPLUS
 (22) Penrose, W; Environ Sci Technol 1990, V24(2), P288
 (23) Puls, R; Environ Sci Technol 1992, V26(3), P614 CAPLUS
 (24) Schmid; US 3106525 1963 CAPLUS
 (25) Stevenson; US 5370800 1994 CAPLUS

L5 ANSWER 18 OF 34 CAPLUS COPYRIGHT 2004 ACS on STN

Full Text	Citing References
AN 1997:223441 CAPLUS	
DN 126:219858	
ED Entered STN: 05 Apr 1997	
TI Silicone oil-based magnetic fluid with low temperature dependence and its manufacture	
IN Fujita, Toyohisa	
PA Taiho Kogyo Co., Ltd., Japan	
SO Jpn. Kokai Tokkyo Koho, 11 pp.	
CODEN: JKXXAF	
DT Patent	
LA Japanese	
IC ICM H01F001-44	
ICS C10M169-04; C10M107-50; C10M125-10; C10N010-16; C10N040-14	
CC 77-8 (Magnetic Phenomena)	
Section cross-reference(s): 38	

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 09017626	A2	19970117	JP 1995-167746	19950703
PRAI	JP 1995-167746		19950703		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 09017626	ICM	H01F001-44
	ICS	C10M169-04; C10M107-50; C10M125-10; C10N010-16; C10N040-14

- AB The fluid contains a silicone oil, a CO₂H-contg. anionic **surfactant**, and magnetic **metal oxide** particles and/or magnetic metal particles. The fluid is manufd. by mixing a suspension contg. the magnetic particles with an alkali agent and then with the **surfactant**, controlling pH of the alk. suspension to ≤ 2 , drying the resulting acidic suspension, and mixing the dried product with a silicone oil. The fluid showed low temp. dependence of viscosity and good **dispersion** stability.
- ST silicone oil magnetic fluid **dispersion** stability; **surfactant** anionic magnetic fluid **dispersion** stability
- IT **Surfactants**
 (anionic, carboxy-contg.; silicone oil-based magnetic fluid with low temp. dependence and its manuf.)
- IT Ferrofluids
 (silicone oil-based magnetic fluid with low temp. dependence and its manuf.)
- IT Polysiloxanes, uses
 RL: TEM (Technical or engineered material use); USES (Uses)
 (silicone oil-based magnetic fluid with low temp. dependence and its manuf.)

IT 1310-73-2, Sodium hydroxide, uses 7664-93-9, Sulfuric acid, uses
 RL: NUU (Other use, unclassified); USES (Uses)
 (pH controller; silicone oil-based magnetic fluid with low temp.
 dependence and its manuf.)

IT 1317-61-9P, **Iron oxide** (Fe₃O₄), uses
 RL: PNU (Preparation, unclassified); TEM (Technical or engineered material
 use); PREP (Preparation); USES (Uses)
 (silicone oil-based magnetic fluid with low temp. dependence and its
 manuf.)

IT 9005-12-3, KF 56 31230-04-3, Methylphenylsilanediol homopolymer
 RL: TEM (Technical or engineered material use); USES (Uses)
 (silicone oil-based magnetic fluid with low temp. dependence and its
 manuf.)

IT 61757-59-3
 RL: MOA (Modifier or additive use); USES (Uses)
 (**surfactant**; silicone oil-based magnetic fluid with low temp.
 dependence and its manuf.)

L5 ANSWER 19 OF 34 CAPLUS COPYRIGHT 2004 ACS on STN

Full Text	Citing References
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AN 1996:649284 CAPLUS
 DN 125:278721
 ED Entered STN: 02 Nov 1996
 TI Storage-stable **metal oxide** pigment **dispersions** and coating compositions
 IN Matsuyama, Masao; Seto, Kazuo; Shimada, Yukio; Goto, Meiji; Nishio, Akira;
 Terada, Hiromi; Isobe, Satoshi
 PA Matsushita Electric Works Ltd, Japan; Dainichiseika Color Chem
 SO Jpn. Kokai Tokkyo Koho, 11 pp.
 CODEN: JKXXAF
 DT Patent
 LA Japanese
 IC ICM C09B067-20
 ICS C04B041-64
 CC 42-6 (Coatings, Inks, and Related Products)
 Section cross-reference(s): 41

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 08199083	A2	19960806	JP 1995-11035	19950126
PRAI	JP 1995-11035		19950126		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 08199083	ICM	C09B067-20
	ICS	C04B041-64

OS MARPAT 125:278721

AB Title compns. contain (A) org. solns. of organosilane oligomers prepd. by
 partial hydrolysis of R₁nSiX_{4-n} [R₁ = (substituted) C₁-8 hydrocarbyl; X =
 hydrolyzable group; n = 0-3] in the presence of colloidal silica
dispersions in org. solvents or water, and (B) **metal oxide** pigments,
 (C) fine powd. silica and/or alumina, and (D) Al alkoxides, Ti alkoxides,
 and/or Zr alkoxides. Thus, 34.09 parts MeSi(OMe)₃ were hydrolyzed in the
 presence of 47.62 parts MA-ST (colloidal silica **dispersions** in MeOH) and
 water to give a soln., 100 parts of which were mixed with TiO₂ 119,
 Aerosil 380 PE (silica) 2.5, and Al isopropoxide 0.5 part to give a compn.
 showing no pptn. after 6 mo.

ST **metal oxide** pigment **dispersion** coating; storage stable pigment
dispersion coating; siloxane oligomer pigment **dispersion** coating;
 colloidal silica siloxane oligomer **dispersion**; **surfactant** resin
 pigment **dispersion** coating; titania **dispersion** siloxane silica coating

IT Siloxanes and Silicones, uses
 RL: TEM (Technical or engineered material use); USES (Uses)
 (TSR 116; storage-stable **metal oxide** pigment

dispersions and coating compns.)

IT Silsesquioxanes
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (oligomeric; storage-stable **metal oxide** pigment
dispersions and coating compns.)

IT Pigments
Surfactants
 (storage-stable **metal oxide** pigment
dispersions and coating compns.)

IT Fluoropolymers
 RL: TEM (Technical or engineered material use); USES (Uses)
 (storage-stable **metal oxide** pigment
dispersions and coating compns.)

IT Siloxanes and Silicones, uses
 RL: TEM (Technical or engineered material use); USES (Uses)
 (acrylic, VY 108; storage-stable **metal oxide**
 pigment **dispersions** and coating compns.)

IT Coating materials
 (pigmented, storage-stable **metal oxide** pigment
dispersions and coating compns.)

IT 9004-57-3, Ethocel STD 100
 RL: TEM (Technical or engineered material use); USES (Uses)
 (Ethocel STD 100; storage-stable **metal oxide**
 pigment **dispersions** and coating compns.)

IT 555-31-7, Aluminum isopropoxide 5593-70-4
 RL: MOA (Modifier or additive use); USES (Uses)
 (additives; storage-stable **metal oxide** pigment
dispersions and coating compns.)

IT 7631-86-9, Silica, uses
 RL: MOA (Modifier or additive use); USES (Uses)
 (colloidal, additives, MA-ST; storage-stable **metal**
oxide pigment **dispersions** and coating compns.)

IT 153315-80-1P, Methyltrimethoxysilane homopolymer, ladder sru
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM
 (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (oligomeric; storage-stable **metal oxide** pigment
dispersions and coating compns.)

IT 25498-03-7P, Methyltrimethoxysilane homopolymer
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material
 use); PREP (Preparation); USES (Uses)
 (oligomeric; storage-stable **metal oxide** pigment
dispersions and coating compns.)

IT 1309-37-1, Red **iron oxide**, uses 1345-16-0, Cobalt
 blue 12227-89-3, Black **iron oxide** 13463-67-7,
 Titania, uses 60650-95-5, Titanium yellow 182761-58-6, Titanium cobalt
 blue
 RL: MOA (Modifier or additive use); USES (Uses)
 (pigments; storage-stable **metal oxide** pigment
dispersions and coating compns.)

IT 1344-28-1, Aluminum oxide (Al₂O₃), uses
 RL: MOA (Modifier or additive use); USES (Uses)
 (powd., additives; storage-stable **metal oxide**
 pigment **dispersions** and coating compns.)

IT 182761-34-8, N 75 (fluoropolymer)
 RL: TEM (Technical or engineered material use); USES (Uses)
 (storage-stable **metal oxide** pigment
dispersions and coating compns.)

IT 96725-74-5, Byk-P 104 115452-84-1, Disperbyk 163 164908-59-2,
 Disperbyk 181
 RL: MOA (Modifier or additive use); USES (Uses)
 (**surfactants**; storage-stable **metal oxide**
 pigment **dispersions** and coating compns.)

L5 ANSWER 20 OF 34 CAPLUS COPYRIGHT 2004 ACS on STN

Full Text	Citing References
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AN 1995:994750 CAPLUS
 DN 124:90481
 ED Entered STN: 22 Dec 1995
 TI Transparent, hard acrylic siloxane coatings and coated plastic lenses
 IN Kayanoki, Hisayuki
 PA Nippon ARC Co., Ltd., Japan
 SO Ger. Offen., 19 pp.
 CODEN: GWXXBX
 DT Patent
 LA German
 IC ICM C09D183-06
 ICS C09D163-00; C09D004-00; C09D017-00; C08J007-04; C09C003-12;
 G02B001-10; G02B001-11
 ICA C09D183-12; C08G077-14; C08G077-20; C08G077-24; C08G077-26; C08G077-28;
 C08G077-46; C08G059-40
 ICI C08K003-20, C08K003-22, C08K003-36, C08K009-06
 CC 42-10 (Coatings, Inks, and Related Products)
 Section cross-reference(s): 73

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 19511627	A1	19951012	DE 1995-19511627	19950330
	US 5654090	A	19970805	US 1995-405595	19950317
	JP 07325201	A2	19951212	JP 1995-66183	19950324
	FR 2718457	A1	19951013	FR 1995-4028	19950405
	FR 2718457	B1	19990108		
	CN 1113509	A	19951220	CN 1995-103900	19950407
	CN 1057107	B	20001004		
	US 5858077	A	19990112	US 1997-850527	19970502
PRAI	JP 1994-71173	A	19940408		
	US 1995-405595	A3	19950317		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
DE 19511627	ICM	C09D183-06
	ICS	C09D163-00; C09D004-00; C09D017-00; C08J007-04; C09C003-12; G02B001-10; G02B001-11
	ICA	C09D183-12; C08G077-14; C08G077-20; C08G077-24; C08G077-26; C08G077-28; C08G077-46; C08G059-40
	ICI	C08K003-20, C08K003-22, C08K003-36, C08K009-06
AB	Scratch-resistant coatings showing no interference fringe when applied on transparent substrates with high refractive index (≥ 1.50), dyeable in dark shades and useful for plastic lenses, comprise (1) fine (1-100 nm) particles of ≥ 1 oxide, esp. $\text{TiO}_2\text{-Fe}_2\text{O}_3\text{-SiO}_2$ or $\text{TiO}_2\text{-Ce}_2\text{O}_3\text{-SiO}_2$ mixts. surface-treated with organosilicon compds., (2) a specified epoxy group-contg. (partially hydrolyzed) Si compd., (3) a specified H_2O - or $\text{C}\leq 4$ alc.-sol. OH- or SH-contg. org. compd. comprising an O, CO_2 , S, COS, or CS_2 bridge and ≥ 1 unsatd. group in its main chain, and (4) a curing catalyst. Thus, 170 g H_2O was added gradually to 303 g Optolake 1130F (a metal oxide sol dispersion in MeOH contg. TiO_2 , Fe_2O_3 , and SiO_2) followed by 191 g γ -glycidoxypolytrimethoxysilane and 69 g $(\text{MeO})_3\text{SiMe}$, the mixt. was stirred for 2 h and dild. with 220 g Me_2CHOH . Polyethylene glycol monomethacrylate (Blenmor PE-200) 40, NH_4ClO_4 (curing catalyst) 3, and a silicone-based surfactant (L 7001) 0.4 g were added to the mixt., the whole was stirred for 1 h, allowed to rest for 48 h at the ambient temp., then applied on an urethane polymer (MR 6) lens, and cured for 1 h at 120° to give a colorless, 1.5-2- μm -thick title coating with refractive index 1.58, SW hardness 4, and crosshatch adhesion 100/100.	
ST	acrylic siloxane coating plastic lens; titanium oxide sol coating	

- plastic lens; **iron oxide** sol coating plastic lens; silica sol coating plastic lens; cerium oxide sol coating plastic lens; glycidoxypolytrimethoxysilane **metal oxide** treatment lens coating; polyethylene glycol monomethacrylate coating plastic lens; interference elimination siloxane coating plastic lens; hardness acrylic siloxane coating plastic lens
- IT Coating materials
(acrylic siloxanes, for plastic lenses; transparent, hard acrylic siloxane coatings and coated plastic lenses)
- IT Urethane polymers, uses
RL: DEV (Device component use); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)
(optical lenses; transparent, hard acrylic siloxane coatings and coated plastic lenses)
- IT Lenses
(plastic; transparent, hard acrylic siloxane coatings and coated plastic lenses)
- IT Transparent materials
(substrates; transparent, hard acrylic siloxane coatings and coated plastic lenses)
- IT Siloxanes and Silicones, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(acrylic, coatings; transparent, hard acrylic siloxane coatings and coated plastic lenses)
- IT 1314-23-4, Zirconium oxide, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(antireflective coating contg.; transparent, hard acrylic siloxane coatings and coated plastic lenses)
- IT 25736-86-1, Polyethylene glycol monomethacrylate
RL: TEM (Technical or engineered material use); USES (Uses)
(coating compn. contg., Blemmer PE 200; transparent, hard acrylic siloxane coatings and coated plastic lenses)
- IT 78-10-4, Tetraethylorthosilicate 111-45-5, Ethylene glycol monoallyl ether 1112-39-6, Dimethyldimethoxysilane 1185-55-3, Methyltrimethoxysilane 1306-38-3, Needlall U-15, uses 1314-60-9, Antimony oxide (Sb2O5) 1830-78-0, NK Ester 701 2478-10-6, 4-Hydroxybutyl acrylate 2530-83-8, γ -Glycidoxypolytrimethoxysilane 2996-92-1, Phenyltrimethoxysilane 3524-68-3, Aronix M 305 16969-10-1, 2-Hydroxy-3-phenoxypropyl acrylate 17832-28-9, 4-Hydroxybutyl vinyl ether 27274-31-3, Nissan Uniox PKA 5001 39420-45-6, Polypropylene glycol monomethacrylate 149719-00-6, Optolake 1130F 160499-51-4, Optolake 1130A
RL: TEM (Technical or engineered material use); USES (Uses)
(coating compn. contg.; transparent, hard acrylic siloxane coatings and coated plastic lenses)
- IT 7790-98-9, Ammonium perchlorate 13963-57-0, Aluminum acetylacetonate
RL: CAT (Catalyst use); USES (Uses)
(curing catalyst; transparent, hard acrylic siloxane coatings and coated plastic lenses)
- IT 9003-39-8, K 25 (Polymer) 25053-15-0, Poly(diallyl phthalate) 158885-88-2, MR 7 (plastic) 172826-42-5, K 23 (plastic) 172826-55-0, ML 13
RL: DEV (Device component use); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)
(optical lens substrate; transparent, hard acrylic siloxane coatings and coated plastic lenses)
- IT 67006-39-7, TS 26 158885-87-1, MR 6
RL: TEM (Technical or engineered material use); USES (Uses)
(optical lens substrate; transparent, hard acrylic siloxane coatings and coated plastic lenses)
- IT 13463-67-7, Titanium dioxide, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(sol **dispersion** in MeOH contg. **iron oxide** and silicon oxide and, Optolake 1130F; transparent, hard acrylic

- siloxane coatings and coated plastic lenses)
- IT 7631-86-9, Silicon dioxide, uses
 RL: TEM (Technical or engineered material use); USES (Uses)
 (sol **dispersion** in MeOH contg. titanium dioxide and
iron oxide and, Optolake 1130F; transparent, hard
 acrylic siloxane coatings and coated plastic lenses)
- IT 1345-13-7, Cerium oxide (Ce2O3)
 RL: TEM (Technical or engineered material use); USES (Uses)
 (sol **dispersion** in MeOH contg. titanium dioxide and silicon
 oxide and, Optolake 1130A; transparent, hard acrylic siloxane coatings
 and coated plastic lenses)
- IT 1309-37-1, **Iron oxide** (Fe2O3), uses
 RL: TEM (Technical or engineered material use); USES (Uses)
 (sol **dispersion** in MeOH contg. titanium dioxide and silicon
 oxide and, Optolake 1130F; transparent, hard acrylic siloxane coatings
 and coated plastic lenses)

L5 ANSWER 21 OF 34 CAPLUS COPYRIGHT 2004 ACS on STN

Full Text	Citing References
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AN 1995:763605 CAPLUS
 DN 123:156276
 ED Entered STN: 30 Aug 1995
 TI A silver halide photographic light sensitive material.
 IN Tsuji, Nobuaki
 PA Konica Corp., Japan
 SO Eur. Pat. Appl., 35 pp.
 CODEN: EPXXDW
 DT Patent
 LA English
 IC ICM G03C001-005
 ICS G03C001-12; G03C001-85; G03C001-89; G03C001-34
 CC 74-2 (Radiation Chemistry, Photochemistry, and Photographic and Other
 Reprographic Processes)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
<u>PI</u>	<u>EP 652469</u>	A1	19950510	<u>EP 1994-308140</u>	19941104
	<u>EP 652469</u>	B1	19970226		
	R: DE, FR, GB, IT				
	<u>US 5554495</u>	A	19960910	<u>US 1994-333141</u>	19941101
	<u>JP 07191433</u>	A2	19950728	<u>JP 1994-273960</u>	19941108
<u>PRAI</u>	<u>JP 1993-279923</u>		19931109		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
<u>EP 652469</u>	ICM	G03C001-005
	ICS	G03C001-12; G03C001-85; G03C001-89; G03C001-34

- AB A Ag halide photog. light-sensitive material is provided, comprising a support having thereon an antistatic layer and further having thereon a Ag halide emulsion layer, wherein the antistatic layer comprises a H2O-sol. conductive polymer and a hydrophobic polymer, the layer having been hardened with a hardener, or the antistatic layer comprises cond. **metal oxide** particles contg. ≥ 1 metal selected from Zn, Ti, Sn, Al, In, Si, Mg, Ba, Mo, W and V; and the Ag halide emulsion is spectrally sensitized by adding thereto a substantially H2O-sol. spectral-sensitizing dye as a **dispersion** of solid particles dispersed in an aq. medium substantially free from an org. solvent and a **surfactant**.
- ST photog film antistatic **metal oxide**; sensitizing dye aq **dispersion**
 2134 3412
- IT Photographic films
 (antistatic layer for static mark prevention)
- IT Photographic sensitizers
 (aq. medium **dispersion** on antistatic layer for static mark

prevention)
 IT 1304-28-5, **Barium oxide**, uses 1309-48-4,
Magnesium oxide, uses 1312-43-2, Indium oxide
1313-27-5, Molybdenum oxide, uses 1314-13-2, Zinc oxide, uses
1314-34-7, Vanadium oxide (V2O3) 1344-28-1, Aluminum oxide, uses
7631-86-9, Silicon oxide, uses 13463-67-7, **Titanium**
oxide, uses 18282-10-5, Tin oxide (SnO2) 86801-50-5
 RL: DEV (Device component use); TEM (Technical or engineered material
 use); USES (Uses)
 (antistatic layer for static mark prevention in photog. material)
 IT 110009-46-6 128835-93-8
 RL: MOA (Modifier or additive use); USES (Uses)
 (photog. sensitizer; aq. medium **dispersion** on antistatic
 layer for static mark prevention)

L5 ANSWER 22 OF 34 CAPLUS COPYRIGHT 2004 ACS on STN

Full Citing
Text References

AN 1995:719419 CAPLUS
 DN 123:92916
 ED Entered STN: 04 Aug 1995
 TI Cosmetic skin-care composition for sun protection containing **metal**
oxides and lipophilic agents
 IN Msika, Philippe; Coutelle, Herve
 PA Pierre Fabre Dermo-Cosmetique, Fr.
 SO PCT Int. Appl., 25 pp.
 CODEN: PIXXD2
 DT Patent
 LA French
 IC ICM A61K007-42
 ICS A61K007-02
 CC 62-4 (Essential Oils and Cosmetics)
 FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9512381	A1	19950511	WO 1994-FR1261	19941028
W: AU, CA, JP, NZ, US				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
FR 2711918	A1	19950512	FR 1993-12998	19931102
FR 2711918	B1	19960126		
AU 9481095	A1	19950523	AU 1994-81095	19941028
EP 726757	A1	19960821	EP 1995-900176	19941028
EP 726757	B1	20010103		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE				
AT 198416	E	20010115	AT 1995-900176	19941028
ZA 9408625	A	19950626	ZA 1994-8625	19941102
PRAI FR 1993-12998	A	19931102		
WO 1994-FR1261	W	19941028		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 9512381	ICM	A61K007-42
	ICS	A61K007-02
WO 9512381	ECLA	A61K008/04H; A61K008/81K4; A61Q001/02; A61Q017/04; A61Q019/00
FR 2711918	ECLA	A61K008/04H; A61K008/81K4; A61Q001/02; A61Q017/04; A61Q019/00

AB A cosmetic skin-care compn. contains a stable microsphere **dispersion** that includes an oily phase contg. at least one **metal oxide**, an aq. gel forming a continuous phase, and a lipophilic protective agent. A sunscreen cream contained cinnamate 0.5-10, TiO2 **dispersion** in oil 0.5-25, polyoxyethylene nonylphenol 0.1-5, mineral oil 1-20, crosslinked C10-30 acrylate-alkylacrylate polymers 0.01-1, Carbomer 0-1, HPMC 0-1, AMP pH = 6.5-7, and water q.s. 100%.

ST skin cosmetic **metal oxide** lipophilic agent; sunscreen cream **titanium oxide** polyacrylate

IT Sunscreens
Surfactants
 (cosmetic skin-care compn. for sun protection contg. **metal oxides** and lipophilic agents)

IT Acrylic polymers, biological studies
 Oxides, biological studies
 RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
 (cosmetic skin-care compn. for sun protection contg. **metal oxides** and lipophilic agents)

IT Sunscreens
 (sprays; cosmetic skin-care compn. for sun protection contg. **metal oxides** and lipophilic agents)

IT Cosmetics
 (creams, cosmetic skin-care compn. for sun protection contg. **metal oxides** and lipophilic agents)

IT Fatty acids, biological studies
 RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
 (esters, cosmetic skin-care compn. for sun protection contg. **metal oxides** and lipophilic agents)

IT Cosmetics
 (foundations, cosmetic skin-care compn. for sun protection contg. **metal oxides** and lipophilic agents)

IT Vinyl compounds, biological studies
 RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
 (polymers, cosmetic skin-care compn. for sun protection contg. **metal oxides** and lipophilic agents)

IT 57-55-6, Propylene glycol, biological studies 1314-13-2, Zinc oxide, biological studies 1314-23-4, Zirconium oxide, biological studies 1332-37-2, **Iron oxide**, biological studies 1344-28-1, Aluminum oxide, biological studies 9016-45-9 11129-18-3, Cerium oxide 13463-67-7, **Titanium oxide**, biological studies 25496-72-4, Glycerol monooleate 25618-55-7D, Polyglycerol, esters 25637-84-7, Glycerol dioleate 26266-58-0, Sorbitan trioleate 26658-19-5, Sorbitan tristearate 29116-98-1, Sorbitan dioleate 39529-26-5, Decaglycerol decastearate 72347-89-8 136723-98-3 145687-02-1, Pemulen TR 2
 RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
 (cosmetic skin-care compn. for sun protection contg. **metal oxides** and lipophilic agents)

L5 ANSWER 23 OF 34 CAPLUS COPYRIGHT 2004 ACS on STN

Full Text	Citing References
AN 1995:397355 CAPLUS	
DN 122:169693	
ED Entered STN: 08 Mar 1995	
TI Wax dispersion of particulate metal oxide as solid protector against UV light	
IN Ahlnas, John Thomas; Lofgren, Timo Valdemar	
PA Kemira Pigments Oy, Finland	
SO PCT Int. Appl., 34 pp. CODEN: PIXXD2	
DT Patent	
LA English	
IC ICM A61K007-42	
CC 62-4 (Essential Oils and Cosmetics)	
FAN.CNT 1	

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PI	WO 9428867	A1	19941222	WO 1994-FI232	19940602
	W: AU, CA, JP, US				
	RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	FI 9401270	A	19941204	FI 1994-1270	19940317
	AU 9468459	A1	19950103	AU 1994-68459	19940602
	EP 804144	A1	19971105	EP 1994-916999	19940602
	EP 804144	B1	20021218		
	R: DE, ES, FR, GB, IT				
	ES 2188613	T3	20030701	ES 1994-916999	19940602
	US 5811082	A	19980922	US 1996-557125	19960508
PRAI	FI 1993-2529	A	19930603		
	FI 1994-1270	A	19940317		
	WO 1994-FI232	W	19940602		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
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WO 9428867	ICM	A61K007-42
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AB A sunscreen or UV protectant which is less dusty, more stable, and easier to handle than prior art products is provided in the form of solid particles with a mean diam. of $\geq 10 \mu\text{m}$ contg., dispersed in 90-20 wt. parts of wax, 10-80 wt. parts of a pigment which reduces the penetration UV light and is made up of **metal oxide** particles (e.g. TiO_2 , ZnO) of mean primary particle diam. $< 0.150 \mu\text{m}$. Thus, finely divided TiO_2 45 was dispersed in a melt of paraffin wax 30, beeswax 5, and Lactodan B30 (emulsifier) 20 wt. parts, cast into sheets, and crushed to granules $\leq 0.84 \text{ mm}$ in size. An oil phase contg. these granules 10.6, Arlacel 780 4.0, mineral oil 12, Miglyol 812 6, and sorbitan isostearate 2 was emulsified with an aq. phase contg. sorbitol 1.25, propylene glycol 1.25, MgSO_4 0.7, Fomblin HC/25 0.25, and water 61.95 wt. parts at 75° . The resulting sunscreen emulsion had a UV protection factor of 17-20.

ST sunscreen **metal oxide** wax; **titanium oxide** wax sunscreen

IT **Surfactants**
(dispersing agents; wax **dispersion** of particulate **metal oxide** as solid protector against UV light)

IT Pigments
(**metal oxides**; wax **dispersion** of particulate **metal oxide** as solid protector against UV light)

IT Dispersing agents
Hair preparations
Sunscreens
(wax **dispersion** of particulate **metal oxide** as solid protector against UV light)

IT Beeswax
Candelilla wax
Carnauba wax
Glycerides, biological studies
Japan wax
Lanolin
Oxides, biological studies
Paraffin waxes and Hydrocarbon waxes, biological studies
Waxes and Waxy substances
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(wax **dispersion** of particulate **metal oxide** as solid protector against UV light)

IT Alcohols, biological studies
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(C12-22, wax **dispersion** of particulate **metal oxide** as solid protector against UV light)

- IT Fatty acids, biological studies
 RL: BUU (Biological use, unclassified); BIOL (Biological study); USES
 (Uses)
 (esters, with glycols; wax **dispersion** of particulate **metal oxide** as solid protector against UV light)
- IT Alcohols, biological studies
 Lanolin
 RL: BUU (Biological use, unclassified); BIOL (Biological study); USES
 (Uses)
 (ethoxylated, wax **dispersion** of particulate **metal oxide** as solid protector against UV light)
- IT Carboxylic acids, biological studies
 RL: BUU (Biological use, unclassified); BIOL (Biological study); USES
 (Uses)
 (hydroxy, esters, wax **dispersion** of particulate **metal oxide** as solid protector against UV light)
- IT Waxes and Waxy substances
 RL: BUU (Biological use, unclassified); BIOL (Biological study); USES
 (Uses)
 (jojoba, wax **dispersion** of particulate **metal oxide** as solid protector against UV light)
- IT Glycerides, biological studies
 RL: BUU (Biological use, unclassified); BIOL (Biological study); USES
 (Uses)
 (soya mono-, hydrogenated, wax **dispersion** of particulate **metal oxide** as solid protector against UV light)
- IT Alcohols, biological studies
 RL: BUU (Biological use, unclassified); BIOL (Biological study); USES
 (Uses)
 (tallow, ethoxylated, ethoxylated; wax **dispersion** of particulate **metal oxide** as solid protector against UV light)
- IT 50-70-4D, D-Glucitol, fatty esters 141-22-0D, Ricinic acid, hydrogenated, ethoxylated 1314-13-2, Zinc oxide (ZnO), biological studies 1338-41-6, Famodan MS 2307-68-8, Solan E 5793-94-2, Artodan CP80 13463-67-7, **Titanium oxide** (TiO₂), biological studies 14792-59-7, Dodecylamine laurate 15830-42-9, Dodecyltrimethylammonium dodecyl sulfate 25618-55-7D, Polyglycerol, fatty esters 30234-20-9, Lactodan B 30 31694-55-0, Polyoxyethylene glycerol 36653-82-4, Cetyl alcohol 55840-13-6, Acidan N12 106392-12-5, Poloxamer 338 109768-05-0, Emuldan HA40 110617-70-4, Tetronic 908 113355-73-0, Panodan AM 129711-64-4, Lactodan P22 161544-17-8, Artodan AM 161544-25-8, Artodan CF 40 161544-51-0, Marlophor T 161544-60-1, Noram S 161544-61-2, Artodan NP 55
 RL: BUU (Biological use, unclassified); BIOL (Biological study); USES
 (Uses)
 (wax **dispersion** of particulate **metal oxide** as solid protector against UV light)

L5 ANSWER 24 OF 34 CAPLUS COPYRIGHT 2004 ACS on STN

	Full Text	Citing References
AN	1993:610258	CAPLUS
DN	119:210258	
ED	Entered STN: 13 Nov 1993	
TI	Oil-in-water cosmetic emulsions containing metal oxides	
IN	Dahms, Gerd Herbert	
PA	Tioxide Specialties Ltd., UK	
SO	Eur. Pat. Appl., 12 pp. CODEN: EPXXDW	
DT	Patent	
LA	English	
IC	ICM A61K009-107	
	ICS A61K007-42	

CC 62-4 (Essential Oils and Cosmetics)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 559319	A2	19930908	EP 1993-300555	19930126
	EP 559319	A3	19950719		
	EP 559319	B1	19980909		
	R: AT, BE, CH, DE, DK, ES, FR, IT, LI, NL, SE				
	GB 2264703	A1	19930908	GB 1993-1515	19930126
	GB 2264703	B2	19950809		
	AT 170743	E	19980915	AT 1993-300555	19930126
	ES 2121050	T3	19981116	ES 1993-300555	19930126
	CA 2088300	AA	19930830	CA 1993-2088300	19930128
	CA 2088300	C	20030708		
	AU 9332055	A1	19930902	AU 1993-32055	19930128
	AU 658967	B2	19950504		
	ZA 9300893	A	19930913	ZA 1993-893	19930209
	JP 06039271	A2	19940215	JP 1993-38576	19930226
	JP 3421070	B2	20030630		
	US 5443759	A	19950822	US 1993-24069	19930301
	US 5516457	A	19960514	US 1995-503213	19950717
PRAI	GB 1992-4387	A	19920229		
	US 1993-24069	A1	19930301		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
EP 559319	ICM	A61K009-107
	ICS	A61K007-42
US 5443759	ECLA	A61K007/42C; A61K007/48A; A61K009/107
AB	Oil in water cosmetic emulsions contain metal oxides having particle size of <0.2µm 0.5-30, emulsifiers <10, an oil phase 5-30, and an aq. phase ≥60%. An oil in water emulsion contained sorbitan monostearate 4.00, stearyl alc. 2.5, paraffin oil 10.00, Tioveil AQ (dispersion of TiO2 in water) 12.50, glycerol 4.00, Carbomer 934 0.08, and water to 100%.	
ST	emulsion cosmetic metal oxide emulsifier; titanium oxide sorbitan stearate emulsion	
IT	Surfactants Amines, biological studies Siloxanes and Silicones, biological studies RL: BIOL (Biological study) (metal oxides coated with, in oil-in-water cosmetic emulsions)	
IT	Oxides, biological studies RL: BIOL (Biological study) (oil-in-water cosmetic emulsions contg. emulsifiers and)	
IT	Glycerides, biological studies Paraffin oils RL: BIOL (Biological study) (oil-in-water cosmetic emulsions contg. metal oxides and)	
IT	Glycerides, biological studies RL: BIOL (Biological study) (C8-10, oil-in-water cosmetic emulsions contg. metal oxides and)	
IT	Alcohols, biological studies RL: BIOL (Biological study) (amino, metal oxides coated with, in oil-in-water cosmetic emulsions)	
IT	Cosmetics Sunscreens (emulsions, oil-in-water, contg. metal oxides and emulsifiers)	
IT	Fatty acids, esters	

- RL: BIOL (Biological study)
(esters, oil-in-water cosmetic emulsions contg. **metal oxides** and)
- IT Alcohols, biological studies
RL: BIOL (Biological study)
(fatty, oil-in-water cosmetic emulsions contg. **metal oxides** and)
- IT Cosmetics
(moisturizers, emulsions, oil-in-water, contg. **metal oxides** and emulsifiers)
- IT Carboxylic acids, biological studies
RL: BIOL (Biological study)
(poly-, oil-in-water cosmetic emulsions contg. **metal oxides** and emulsifiers and)
- IT Carboxylic acids, compounds
RL: BIOL (Biological study)
(poly-, salts, oil-in-water cosmetic emulsions contg. **metal oxides** and emulsifiers and)
- IT Alcohols, biological studies
RL: BIOL (Biological study)
(polyhydric, **metal oxides** coated with, in oil-in-water cosmetic emulsions)
- IT Sunburn and Suntan
(suntanning agents, emulsions, oil-in-water, contg. **metal oxides** and emulsifiers)
- IT 1314-23-4, Zirconium oxide, biological studies 7631-86-9, Silicon oxide, biological studies 9003-01-4 9003-05-8, Polyacrylamide 9004-32-4, Carboxymethyl cellulose 11138-66-2, Xanthan gum
RL: BIOL (Biological study)
(**metal oxides** coated with, in oil-in-water cosmetic emulsions)
- IT 1344-28-1, Aluminum oxide, miscellaneous
RL: MSC (Miscellaneous)
(**metal oxides** coated with, in oil-in-water cosmetic emulsions)
- IT 1314-13-2, Zinc oxide (ZnO), biological studies 13463-67-7, **Titanium oxide**, biological studies
RL: BIOL (Biological study)
(oil-in-water cosmetic emulsions contg. emulsifiers and)
- IT 110-27-0, Isopropyl myristate 112-92-5, Stearyl alcohol 661-19-8, Behenyl alcohol 1338-41-6, Sorbitan monostearate 3687-46-5, Decyl oleate 9007-16-3, Carbomer 934 22047-49-0, Octyl stearate 77091-02-2, Rewoderm S 1333
RL: BIOL (Biological study)
(oil-in-water cosmetic emulsions contg. **metal oxides** and)
- IT 1332-37-2, **Iron oxide**, biological studies
RL: BIOL (Biological study)
(oil-in-water cosmetic emulsions contg. emulsifiers and)

L5 ANSWER 25 OF 34 CAPLUS COPYRIGHT 2004 ACS on STN

Full Text	Citing References
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AN	1993:605889 CAPLUS
DN	119:205889
ED	Entered STN: 13 Nov 1993
TI	Catalysts for preparation of alkylene oxide adducts
IN	Fukada, Isao; Sugawara, Harushige
PA	Mitsui Toatsu Chemicals, Japan
SO	Jpn. Kokai Tokkyo Koho, 5 pp. CODEN: JKXXAF
DT	Patent
LA	Japanese
IC	ICM C07C043-11

ICS B01J023-02; C07C041-02
 ICA C07B061-00
 CC 46-3 (Surface Active Agents and Detergents)
 Section cross-reference(s): 35

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 05170688	A2	19930709	JP 1991-344651	19911226
PRAI	JP 1991-344651		19911226		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 05170688	ICM	C07C043-11
	ICS	B01J023-02; C07C041-02
	ICA	C07B061-00

AB Adducts of active H-contg. org. compds. and alkylene oxides are prepd. by using Si- and Ba-contg. MgO catalysts. Adding aq. Ba(NO₃)₂ to an aq. **dispersion** of MgO and Si(OEt)₄, stirring 24 h, drying, and heating at 600° gave a catalyst contg. oxides of Mg, Si, and Ba. The catalyst was used for the ethoxylation of dodecyl alc. with ethylene oxide at 170°, giving polyethylene glycol monododecyl ether contg. 0.2% unreacted alc. and 1.2% PEG.

ST ethoxylation catalyst **metal oxide**; **magnesium oxide** catalyst ethoxylation; silicon oxide catalyst ethoxylation; **barium oxide** catalyst ethoxylation; oxirane ethoxylation catalyst; alc ethoxylation catalyst

IT **Surfactants**
 (ethoxylates, prepn. of, catalysts for, **magnesium oxide**-contg.)

IT Ethoxylation catalysts
 (**magnesium oxide**, barium- and silicon-contg., for alcs. by oxirane)

IT Polymerization catalysts
 (ring-opening, **magnesium oxide**, silicon- and barium-contg., for alkylene oxides)

IT 1304-28-5, **Barium oxide** (BaO), uses 1309-48-4, **Magnesium oxide**, uses 11126-22-0, Silicon oxide
 RL: CAT (Catalyst use); USES (Uses)
 (catalysts, for ethoxylation of alcs. by oxirane)

IT 9002-92-0P
 RL: IMF (Industrial manufacture); PREP (Preparation)
 (prepn. of, ethoxylation catalysts for)

L5 ANSWER 26 OF 34 CAPLUS COPYRIGHT 2004 ACS on STN

Full Text	Citing References
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AN 1991:494207 CAPLUS

DN 115:94207

ED Entered STN: 06 Sep 1991

TI Multi-functional additives (MFA's) as optimizers in rubber formulation design

AU Hepburn, Claude; Halim, Massan H.; Mahdi, Mauaid S.

CS Inst. Polymer Technol. Mater. Eng., Loughborough Univ. Technol., Loughborough, UK

SO Kautschuk Gummi Kunststoffe (1990), 43(9), 794-809

CODEN: KGUKAC; ISSN: 0022-9520

DT Journal

LA English

CC 39-9 (Synthetic Elastomers and Natural Rubber)

AB The title discussion focuses on the effect of MFA's on carbon black- or silica-filled natural rubber, natural rubber-SBR, and natural rubber-butyl rubber compns. MFA's affect good flow during processing of uncured mixes, good release from mill rolls and mold release, acceleration of vulcanization, and superior filler **dispersion**. The effect of MFA's as

curing agents for chloroprene rubber is also discussed.

ST multifunctional additive rubber property optimization

IT Rubber, butadiene-styrene, uses and miscellaneous

Rubber, butyl, uses and miscellaneous

Rubber, natural, uses and miscellaneous

RL: USES (Uses)

(cationic **surfactants** as multifunctional additives for, optimization of formulation by)

IT Vulcanization accelerators and agents

(cationic **surfactants**, contg. **metal oxides**, for chloroprene)

IT Dispersing agents

Lubricants

(cationic **surfactants**, for rubber compds.)

IT Coupling agents

(for tire tread compns., cationic **surfactants** as synergistic agents in)

IT Carbon black, uses and miscellaneous

RL: USES (Uses)

(rubber compds. filled with, cationic **surfactant** multifunctional additives for, processing in relation to)

IT **Surfactants**

(cationic, multifunctional additives, optimization of rubber formulation by)

IT Tires

(treads, cationic **surfactants** as synergistic agents for coupling compds. in)

IT 1309-48-4, **Magnesium oxide**, uses and miscellaneous

RL: CAT (Catalyst use); USES (Uses)

(catalysts, contg. zinc oxide and cationic **surfactants**, for vulcanization of chloroprene)

IT 109-76-2D, 1,3-Propanediamine, N-tallow derivs. 4253-76-3 5538-95-4
7173-60-6, N-Palmityl-1,3-propanediamine 7173-62-8, N-Oleyl-1,3-propanediamine 37926-81-1, 1,3-Propanediamine dioleate 37926-81-1D, N-tallow derivs. 61996-69-8, 1,3-Propanediamine distearate 61996-69-8D, N-tallow derivs. 71187-18-3, 1,2-Propanediamine dioleate 85557-21-7, 1,3-Propanediamine oleate 99739-95-4, 1,3-Propanediamine stearate 99739-96-5, 1,2-Propanediamine distearate 107140-26-1

RL: USES (Uses)

(multifunctional additives, for optimization of rubber formulation)

IT 7631-86-9, Silica, uses and miscellaneous

RL: USES (Uses)

(rubber compds. filled with, cationic **surfactant** multifunctional additives for, processing in relation to)

IT 9003-55-8 9010-85-9

RL: USES (Uses)

(rubber, cationic **surfactants** as multifunctional additives for, optimization of formulation by)

IT 1314-13-2, Zinc oxide, uses and miscellaneous

RL: USES (Uses)

(vulcanization of rubber compds. in presence of multifunctional additives retarded by)

L5 ANSWER 27 OF 34 CAPLUS COPYRIGHT 2004 ACS on STN

Full Text	Citing References
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AN 1990:557537 CAPLUS

DN 113:157537

ED Entered STN: 27 Oct 1990

TI Zirconium oxide fine powder and its preparation

IN Takahashi, Hiroyuki; Konno, Norijiro

PA Ricoh Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 5 pp.

CODEN: JKXXAF

DT Patent
 LA Japanese
 IC ICM C01G025-00
 CC 57-2 (Ceramics)
 FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 02137728	A2	19900528	JP 1988-291240	19881118
PRAI JP 1988-291240		19881118		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 02137728	ICM	C01G025-00

- AB A fine ZrO₂ powder contg. oxides of Ca, Mg, Y, and lanthanides is prepd. by mixing Zr alkoxide and ≥ 1 of alkoxides of the metals with **surfactants**, water, nonpolar org. solvent, and optionally alkanol, and hydrolyzing the alkoxides. The **metal oxides** are stabilizers for zirconia-based ceramics and are dispersed uniformly in the zirconia powder. NP-6 (ethylene glycol nonylphenyl ether), Zr(OBu)₄, Ca(OBu)₂ were mixed in cyclohexane and the resulting soln. was hydrolyzed to give a granular powder useful as a raw material for ZrO₂-based ceramics.
- ST zirconia powder alkoxide hydrolysis ceramic; stabilizer **metal oxide dispersion** ceramic
- IT **Surfactants**
 (metal oxide-contg. zirconia powder prepn. from zirconium alkoxide and metal alkoxide and, for zirconia ceramics)
- IT Rare earth oxides
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (zirconia powder contg., prepn. of, for zirconia-based ceramics)
- IT Ceramic materials and wares
 (zirconia powder prepn. for, contg. **metal oxide** stabilizers)
- IT Alcohols, compounds
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (metal salts, stabilizers, in zirconia powder prepn.)
- IT Alcohols, compounds
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (zirconium salts)
- IT 51287-43-5, Calcium dibutoxide
 RL: USES (Uses)
 (calcium oxide-contg. zirconia powder prepn. from zirconium alkoxide and, for zirconia-based ceramics)
- IT 15921-15-0, Magnesium dibutoxide
 RL: USES (Uses)
 (magnesium oxide-contg. zirconia powder prepn. from zirconium alkoxide and, for zirconia-based ceramics)
- IT 37318-80-2, Sulfanol NP 6
 RL: USES (Uses)
 (metal oxide-contg. zirconia powder prepn. from zirconium alkoxide and metal alkoxide and, for zirconia ceramics)
- IT 1314-23-4P, Zirconia, preparation
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (prepn. of powd., contg. **metal oxide** stabilizer, by hydrolysis of zirconium alkoxide and metal alkoxide)
- IT 7440-65-5D, Yttrium, alkoxides
 RL: USES (Uses)
 (yttrium oxide-contg. zirconia powder prepn. from zirconium alkoxide and, for zirconia-based ceramics)

L5 ANSWER 28 OF 34 CAPLUS COPYRIGHT 2004 ACS on STN

Full Text	Citing References
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AN 1990:181442 CAPLUS
 DN 112:181442

ED Entered STN: 12 May 1990
 TI The interaction between pigment and **surfactant**
 AU Meguro, Kenjiro
 CS Inst. Colloid Interface Sci., Sci. Univ. Tokyo, Tokyo, Japan
 SO FATIPEC Congress (1988), Vol. I(19th), 49-63
 CODEN: FAPVAP; ISSN: 0430-2222
 DT Journal
 LA English
 CC 42-6 (Coatings, Inks, and Related Products)
 Section cross-reference(s): 66
 AB The interaction between some **metal oxide** sols and **surfactants** is described as factors of hydrophobic coagulation and redispersion of the hydrophobic coagulates by **surfactant** bilayers, and the mechanism of pigment **dispersion** is explained based on these interactions. Mechanisms of flocculation and redispersion are explained in terms of 2-fold **dispersion** layers.
 ST interaction **dispersion** pigment **surfactant**
 IT **Surfactants**
 (dispersion of pigments in aq. systems in presence of)
 IT Pigments
 (dispersion of, in aq. systems, **surfactant** effect on)
 IT 9003-02-5, Acrylic acid-potassium acrylate copolymer 25322-68-3, Polyethylene oxide 89699-20-7
 RL: USES (Uses)
 (dispersion of pigments in aq. systems in presence of)
 IT 151-21-3, SDS, properties
 RL: PRP (Properties)
 (dispersion of pigments in aq. systems in presence of)
 IT 1332-37-2, **Iron oxide**, uses and miscellaneous
13463-67-7, Titanium dioxide, uses and miscellaneous
 RL: USES (Uses)
 (pigments, **dispersion** of, in aq. systems, **surfactant** effect on)
 IT 9003-53-6P, Polystyrene
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (prepn. of, in aq. pigment **dispersions**, **surfactant** effect on)

L5 ANSWER 29 OF 34 CAPLUS COPYRIGHT 2004 ACS on STN

Full Text	Citing References
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AN	1989:216357	CAPLUS		
DN	110:216357			
ED	Entered STN: 10 Jun 1989			
TI	Fuel-cell electrodes			
IN	Maoka, Tadanori			
PA	Toshiba Corp., Japan			
SO	Jpn. Kokai Tokkyo Koho, 3 pp.			
	CODEN: JKXXAF			
DT	Patent			
LA	Japanese			
IC	ICM H01M004-96			
CC	52-2 (Electrochemical, Radiational, and Thermal Energy Technology)			
FAN.CNT	1			
	PATENT NO.	KIND	DATE	APPLICATION NO.
	-----	---	-----	-----
PI	<u>JP 01048372</u>	A2	19890222	<u>JP 1987-203079</u>
PRAI	<u>JP 1987-203079</u>		19870817	19870817

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
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JP 01048372	ICM	H01M004-96

AB In conductive, porous carbon electrodes having grooves for gas passages on

1 side and coated with a layer of noble metal catalyst-C-fluoropolymer **dispersion** on the other side, the **dispersion** contains fine particles of **metal oxides**. Thus, an aq. **dispersion** of carbon loaded with 0.6 g Pt, PTFE, a nonionic **surfactant**, and 0.1 g ZnO was filtered and applied on a porous C substrate, and baked at 340° for 20 min in N to obtain an electrode. When used as an O cathode, this electrode had a voltage 10-mV higher than an electrode without ZnO in a half cell using 105% H3PO4 electrolyte at 190°.

ST fuel cell electrode catalyst layer; zinc oxide electrode catalyst layer; **magnesium oxide** electrode catalyst layer; **calcium oxide** electrode catalyst layer

IT Electrodes
(fuel-cell, catalytic, **metal oxides** powder in catalyst **dispersions** for manuf. of)

IT 1305-78-8, **Calcium oxide**, uses and miscellaneous
1309-48-4, **Magnesium oxide**, uses and miscellaneous
1314-13-2, Zinc oxide, uses and miscellaneous

RL: CAT (Catalyst use); USES (Uses)

(catalyst mixts. contg., for improved **dispersion**, in manuf. of electrodes for fuel cells)

L5 ANSWER 30 OF 34 CAPLUS COPYRIGHT 2004 ACS on STN

Full Text	Citing References
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AN 1979:114159 CAPLUS

DN 90:114159

ED Entered STN: 12 May 1984

TI Magnetic **metal oxide** powders with improved surface properties

IN Miyake, Akira; Watatani, Seiji

PA Hitachi Maxell, Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 4 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC C01B013-14

CC 77-3 (Magnetic Phenomena)

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 53134796	A2	19781124	JP 1977-49159	19770428
JP 61001373	B4	19860116		
PRAI JP 1977-49159		19770428		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 53134796	IC	C01B013-14

AB A **dispersion** contg. magnetic **metal oxide** powder and metal adsorbed on the magnetic powder surface is prep'd., then an anionic **surfactant** is added to the **dispersion**, and the powder is sep'd. from the **dispersion** and dried to give magnetic powder with improved surface properties. Thus, FeCl3 0.01 mol/L was dissolved in an HOAc soln. (pH = 4.0), then γ -Fe2O3 powder 30 g was dispersed in the soln. (300 mL), a 20 nmol/L Na dodecylbenzenesulfonate soln. 300 mL was added to the **dispersion**; the **dispersion** was then mixed well with PhMe, and γ -Fe2O3 powder extd. into the PhMe phase was dried to give γ -Fe2O3 powder having improved dispersibility in the resin binder for a magnetic tape.

ST **iron oxide** magnetic powder

IT Magnetic substances

(**iron oxide** powder, with surface property improvement)

IT 1309-37-1, properties

RL: PRP (Properties)

(magnetic powder, with surface property improvement)

L5 ANSWER 31 OF 34 CAPLUS COPYRIGHT 2004 ACS on STN

Full Text	Citing References
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AN 1976:75426 CAPLUS
 DN 84:75426
 ED Entered STN: 12 May 1984
 TI **Metal oxide** paste **dispersions** and their use as curing agents
 IN Vickery, Glenn C.
 PA Basic Inc., USA
 SO U.S., 12 pp.
 CODEN: USXXAM
 DT Patent
 LA English
 IC C08K
 NCL 260028500B
 CC 38-10 (Elastomers, Including Natural Rubber)
 FAN.CNT 3

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 3923712	A	19751202	US 1973-388580	19730815
	US 3850845	A	19741126	US 1973-354339	19730425
PRAI	US 1973-354339		19730425		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
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US 3923712	IC	C08K
	NCL	260028500B

AB Paste **dispersions** of MgO [1309-48-4], ZnO [1314-13-2], a nonaq. liq. vehicle, and a **surfactant** are useful as vulcanizing agents for halogen-contg. rubbers, e.g. neoprene. Thus, 6 parts of a paste prepd. by mixing MgO 52, ZnO 17.9, Protox 169 01, sorbitan trioleate [26266-58-0] 1, microcrystn. wax 4, and Sunthene 4240 [52932-81-7] 25, feeding through a colloid mill, and extruding, was mixed with Neoprene GNA 100, steric acid 0.5, Neozone A 2, and SRF black 29 to give a stock having min. torque 3.7, scorch time 7.7, optimum cure time 16.4, optimum cure torque 32.5, and max. torque 36 (oscillating disk remometer 121°, 1° arc 100 cycles) compared with 5, 6.3, 11.2, 35, and 38, resp., for a stock conventionally mixed with 4 parts MgO and 5 parts ZnO.

ST neoprene rubber vulcanization agent; **magnesium oxide** paste vulcanization; zinc oxide paste vulcanization; **surfactant** vulcanization paste; naphthenic oil vulcanization paste; paraffin wax vulcanization paste

IT Naphthenic oils
 Paraffin waxes and Hydrocarbon waxes, uses and miscellaneous
 RL: USES (Uses)
 (**magnesium oxide**-zinc oxide pastes contg., for vulcanization of neoprene rubbers)

IT Vulcanizing agents
 (**magnesium oxide**-zinc oxide pastes, for neoprene rubber)

IT **Surfactants**
 (sorbitan oleates, **magnesium oxide**-zinc oxide pastes contg., for neoprene rubber vulcanization)

IT Rubber, neoprene, uses and miscellaneous
 (vulcanizing agents for, **magnesium oxide**-zinc oxide paste as)

IT 1338-43-8 26266-58-0
 RL: USES (Uses)
 (**surfactants**, for **magnesium oxide**-zinc oxide vulcanization pastes for neoprene rubber)

IT 1309-48-4, uses and miscellaneous
 RL: USES (Uses)
 (vulcanization pastes, contg. zinc oxide, for neoprene rubber)

IT 1314-13-2, uses and miscellaneous
 RL: USES (Uses)
 (vulcanizing pastes, contg. **magnesium oxide**, for
 neoprene rubber)

L5 ANSWER 32 OF 34 CAPLUS COPYRIGHT 2004 ACS on STN

Full Text	Citing References
AN 1976:24427 CAPLUS	
DN 84:24427	
ED Entered STN: 12 May 1984	
TI Photosensitive material for printed circuits	
IN Lippits, Gerardus J. M.; Debruijn, Henricus A.; Janssen, Petrus J.; Van Ruler, Johannes	
PA N. V. Philips' Gloeilampenfabrieken, Neth.	
SO Ger. Offen., 13 pp.	
CODEN: GWXXBX	
DT Patent	
LA German	
IC H01B	
CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic Processes)	
FAN.CNT 2	

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	<u>DE 2454536</u>	A1	19750605	<u>DE 1974-2454536</u>	19741116
	<u>NL 7316313</u>	A	19750602	<u>NL 1973-16313</u>	19731129
	<u>SE 7414805</u>	A	19750530	<u>SE 1974-14805</u>	19741126
	<u>SE 404558</u>	C	19790118		
	<u>SE 404558</u>	B	19781009		
	<u>JP 50085876</u>	A2	19750710	<u>JP 1974-135259</u>	19741126
	<u>JP 56007219</u>	B4	19810217		
	<u>GB 1487227</u>	A	19770928	<u>GB 1974-51132</u>	19741126
	<u>AT 7409459</u>	A	19810115	<u>AT 1974-9459</u>	19741126
	<u>AT 363540</u>	B	19810810		
	<u>BE 822669</u>	A1	19750527	<u>BE 1974-150920</u>	19741127
	<u>FR 2253229</u>	A1	19750627	<u>FR 1974-38987</u>	19741128
	<u>FR 2253229</u>	B1	19790525		
	<u>JP 55130197</u>	A2	19801008	<u>JP 1979-158750</u>	19791208
	<u>JP 57048879</u>	B4	19821019		
PRAI	<u>NL 1973-16313</u>		19731129		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
DE 2454536	IC	H01B

AB In the process of Neth. 67 12,933 (CA 71: 43593d), where the photoreaction product of a semiconductive **metal oxide** liberates Cu or a nobler metal from their salt solns., the resinous binder for the oxide can be omitted if a **dispersion** of $<0.5 \mu$ TiO₂ particles of pH 2-4 is used in which the TiO₂ carries a charge of opposite polarity to that of the substrate's surface. The pattern of liberated metal centers is intensified to a conductive unit by a phys. developer or electroless plating. Holes in the printed circuit can be rendered conductive in the same manner, by wetting with the **dispersion**, heating $>50^\circ$, light-exposure, and development. Thus, a glass plate was immersed in a 2-5% aq. **dispersion** of TiO₂ (Degussa P 25), adjusted with HCl to pH 3. The plate was rinsed, dried, and treated with a mixt. of PdCl₂ 2 g, 37% HCl 20 ml, glycerol 1%, and Tensagex (anionic **surfactant**) 0.4%. The dried plate was exposed through a neg. to a 125-W high-pressure Hg lamp at 30 cm for 30 sec, rinsed 1 min to remove unexposed PdCl₂, and plated for 2 min in a soln. contg. CuSO₄, EDTA tetra-Na salt, NaOH, and HCHO. The Cu pattern adhered very well to the glass plate.

ST photosensitive **titanium oxide** elec circuit

IT Photography

(photosensitive compns. contg. noble metal salt and titanium dioxide)

- dispersion** for, for printed elec. circuit prepn.)
- IT Electric circuits
(printed, photosensitive compns. contg. noble metal salt and titanium dioxide aq. **dispersion** for image formation in prepn. of)
- IT Photographic emulsions
(silver-free, contg. noble metal salt and titanium dioxide **dispersion** for printed circuit prepn.)
- IT Epoxy resins
RL: PREP (Preparation)
(supports, for photosensitive compns. contg. palladium chloride and titanium dioxide aq. **dispersion** for printed elec. circuit prepn.)
- IT Iron yttrium oxide (Fe₅Y₃O₁₂), solid soln. with gadolinium **iron oxide**
RL: PREP (Preparation)
(supports, for photosensitive compns. contg. palladium chloride and titanium dioxide aq. **dispersion** for printed elec. circuit prepn.)
- IT **Barium oxide**, solid soln. with titanium dioxide and zirconium oxide
Gadolinium **iron oxide** (Gd₃Fe₅O₁₂), solid soln. with iron yttrium oxide
Titanium oxide (TiO₂), solid soln. with **barium oxide** and zirconium oxide
Zirconium oxide (ZrO₂), solid soln. with **barium oxide** and titanium dioxide
RL: PREP (Preparation)
(supports, for photosensitive compns. contg. palladium chloride and titanium dioxide aq. **dispersion** for printed elec. circuit prepn.)
- IT 7647-10-1
RL: USES (Uses)
(photosensitive compns. contg. aq. titanium dioxide **dispersion** and, for printed elec. circuit prepn.)
- IT 13463-67-7, uses and miscellaneous
RL: USES (Uses)
(photosensitive compns. contg. palladium chloride and aq. **dispersion** of, for printed elec. circuit prepn.)
- IT 1344-28-1, uses and miscellaneous
RL: USES (Uses)
(supports, for photosensitive compns. contg. palladium chloride and titanium dioxide aq. **dispersion** for printed elec. circuit prepn.)

L5 ANSWER 33 OF 34 CAPLUS COPYRIGHT 2004 ACS on STN

Full Text	Citing References
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AN 1975:172358 CAPLUS
DN 82:172358
ED Entered STN: 12 May 1984
TI **Metal oxide paste dispersions** as curing agents
IN Vickery, Glenn C.
PA Basic Inc., USA
SO U. S. Publ. Pat. Appl. B, 12 pp. Avail. US Pat. Trademark Off.
CODEN: USXXDP
DT Patent
LA English
IC C08F
NCL 260028500B
CC 38-10 (Elastomers, Including Natural Rubber)
FAN.CNT 3

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 388580	A1	19750128	US 1973-388580	19730815

US 3850845 A 19741126 US 1973-354339 19730425
 PRAI .US 1973-354339 19730425

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
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US 388580	IC NCL	C08F 260028500B
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- AB MgO [1309-48-4]-ZnO [1314-13-2] pastes in a mineral oil vehicle and a **surfactant** used as vulcanizing agents for halogen-contg. rubbers allow addn. of ZnO at the beginning of mixing giving uniform **dispersions**, reduce the amt. of oxide required, allow one-pass mixing, improve stock properties, and reduce hydration problems. For example, a neoprene rubber compn. cured with a paste contg. MgO 40, ZnO 35, sorbitan monooleate [1338-43-8], microcryst. wax 3, and Sunthene 4240 naphthenic oil 21 had scorch time 8.8 min, optimum cure time 13.7 min, optimum cure torque 20, max. torque 22, and Mooney scorch (T5 at 121°) 64.0 min compared with a Mooney scorch of 40 min for a stock with MgO and ZnO added in powd. form.
- ST **magnesium oxide** paste vulcanization; zinc oxide paste vulcanization; neoprene rubber vulcanization
- IT Naphthenic oils
 RL: USES (Uses)
 (**magnesium oxide**-zinc oxide **dispersions** in, vulcanizing agents)
- IT Vulcanizing agents
 (**magnesium oxide**-zinc oxide-sorbitan oleate pastes, for neoprene rubber)
- IT **Surfactants**
 (sorbitan oleates, for **magnesium oxide**-zinc oxide paste vulcanizing agents)
- IT Rubber, neoprene, uses and miscellaneous
 (vulcanizing agents for, **magnesium oxide**-sorbitan oleate-zinc oxide pastes as)
- IT 1338-43-8 26266-58-0
 RL: USES (Uses)
 (**surfactants**, for **magnesium oxide**-zinc oxide paste vulcanizing agents)
- IT 1314-13-2, uses and miscellaneous
 RL: USES (Uses)
 (vulcanizing agents, contg. **magnesium oxide**, for neoprene rubber)
- IT 1309-48-4, uses and miscellaneous
 RL: USES (Uses)
 (vulcanizing agents, contg. zinc oxide, for neoprene rubber)

L5 ANSWER 34 OF 34 CAPLUS COPYRIGHT 2004 ACS on STN

Full Text	Citing References
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AN 1975:99721 CAPLUS
 DN 82:99721
 ED Entered STN: 12 May 1984
 TI **Metal oxide** paste **dispersions** and use as curing agents
 IN Vickery, Glenn C.
 PA Basic, Inc.
 SO U.S., 8 pp.
 CODEN: USXXAM
 DT Patent
 LA English
 IC B01J
 NCL 252430000
 CC 38-9 (Elastomers, Including Natural Rubber)
 FAN.CNT 3

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PI	US 3850845	A	19741126	US 1973-354339	19730425
	US 388580	A1	19750128	US 1973-388580	19730815
	US 3923712	A	19751202	US 1973-388580	19730815
	DE 2348735	A1	19741121	DE 1973-2348735	19730928
	DE 2348735	B2	19800327		
	FR 2227039	A1	19741122	FR 1973-35003	19731001
	JP 50003447	A2	19750114	JP 1973-110234	19731002
	JP 52019575	B4	19770528		
	CA 1012685	A1	19770621	CA 1973-182457	19731002
	AU 7360997	A1	19750410	AU 1973-60997	19731004
	BE 805738	A1	19740201	BE 1973-136406	19731005
	IT 999624	A	19760310	IT 1973-69935	19731005
	NL 7314667	A	19741029	NL 1973-14667	19731025
	GB 1398695	A	19750625	GB 1973-55726	19731130
	ES 422053	A1	19760416	ES 1974-422053	19740105
	SE 7404154	A	19741213	SE 1974-4154	19740327
	SE 446342	B	19860901		
	SE 446342	C	19861211		
	DK 147919	B	19850107	DK 1974-1719	19740328
	DK 147919	C	19850722		
	BR 7403134	A0	19741203	BR 1974-3134	19740419
	JP 52000842	A2	19770106	JP 1976-66648	19760609
	JP 56022463	B4	19810525		
	JP 55069633	A2	19800526	JP 1979-119179	19790917
PRAI	MX 1973-354339		19730425		
	US 1973-354339		19730425		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
US 3850845	IC	B01J
	NCL	252430000
AB	The processability and storage stability of neoprene rubber compn. contg. MgO [1309-48-4] and ZnO [1314-13-2] was improved by addn. of MgO and ZnO as a paste with sorbitan monooleate (I) [1338-43-8] or sorbitan trioleate [26266-58-0], microcryst. or castor wax, and Sunthene 4240 (II) [52932-81-7] (mineral oil). Thus, a compn. contg. neoprene rubber (GNA140P), stearic acid, and a MgO-ZnO-I-microcryst. wax-II mixt. had Mooney scorch time 64.0min (T5 at 121°) compared with 40 min for a GNA 140P-stearic acid-MgO-ZnO compn., in which the MgO and the ZnO were added in the given order in powder form.	
ST	scorch resistance neoprene rubber; processability neoprene rubber vulcanizates; storage stability neoprene rubber; zinc oxide neoprene rubber; magnesia neoprene rubber	
IT	Waxes and Waxy substances RL: USES (Uses) (castor, magnesium oxide -zinc oxide pastes contg., for improved processability in neoprene rubber compns.)	
IT	Paraffin waxes and Hydrocarbon waxes, uses and miscellaneous RL: USES (Uses) (magnesium oxide -zinc oxide pastes contg., for improved processability in neoprene rubber compns.)	
IT	Vulcanizing agents (magnesium oxide -zinc oxide-mineral oil- surfactant -wax pastes, for neoprene rubber compns.)	
IT	Oils RL: USES (Uses) (mineral, magnesium oxide -zinc oxide pastes contg., for improved processability in neoprene rubber compns.)	
IT	Surfactants (sorbitan oleates, magnesium oxide -zinc oxide pastes contg., for improved processability in neoprene rubber compns.)	
IT	Rubber, neoprene, uses and miscellaneous (vulcanizing agents for, magnesium oxide -zinc oxide-mineral oil- surfactant -wax pastes as)	

IT 52932-81-7
 RL: USES (Uses)
 (oils, **magnesium oxide**-zinc oxide pastes contg.,
 for improved processability in neoprene rubber compns.)

IT 1338-43-8 26266-58-0
 RL: USES (Uses)
 (**surfactants**, **magnesium oxide**-zinc oxide
 pastes contg., for improved processability in neoprene rubber compns.)

IT 1314-13-2, uses and miscellaneous
 RL: USES (Uses)
 (vulcanizing agents, pastes of **magnesium oxide** and,
 contg. mineral oil, **surfactants** and waxes, for improved
 processability in neoprene rubber compns.)

IT 1309-48-4, uses and miscellaneous
 RL: USES (Uses)
 (vulcanizing agents, pastes of zinc oxide and, contg. mineral oil,
surfactants and waxes, for improved processability in neoprene
 rubber compns.)

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